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H A N D - B O O K

OF

K A N S A S .

CONTAINING A DESCRIPTION OF

The Physical Geography and Geology of the State. Its Natural Advantages and Resources, its Railroads, Educational Institutions, Stage Routes, Prices of Land, Method of Procuring Government Land by Purchase and by Pre-emption and Homestead Claims. Also, a Description of the Counties, &c.

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PREFACE.

The object of this Hand-Book is to give, in a very brief manner, such information as may be useful to travelers, and more particularly to those who may wish to emigrate to Kansas. The writer has traveled extensively in the summers of 1867 and 1868, in the various parts of the State, and has collected facts, as he was able, from residents, from public documents, particularly Swallow's and Mudge's Geological Surveys, and public officers in the land offices and the various departments of the State. As immense quantities of excellent government land are open to the settler under the Pre-emption and Homestead Acts, a full account is given of those laws, and of the way to procure land through them. In describing the natural advantages of the country, care has been taken not to make exaggerated statements.



HAND-BOOK OF KANSAS.

GEOGRAPHICAL AND HISTORICAL SUMMARY.

Kansas, in form, is nearly a parallelogram. It lies between latitude 37° and 40° N. and longitude 94.40° and 102° W. Its mean length, from east to west, is about 400 miles, and its breadth is about 200 miles. Its area is about 80,000 square miles, or 50,000,000 acres—an area considerably greater than that of all the New England States, and about equal to that of England, Wales, and Ireland. It was admitted to the Union as a State in 1861, being the thirty-fifth State. A more than usual interest gathers round its early settlement, from the fact that a strenuous struggle was made for years by the friends of human freedom, against the propagandists of slavery. The motto on the seal of Kansas is indeed significant: "*Per aspera ad astra*,"—"Through rough struggles we reach the stars."

The moral of the severe and romantic history of Kansas is, that in a fair encounter the right will at last prevail. That while the deeds and names of oppressors and their minions shall be held in execration, the fair fame and noble souls of martyrs to liberty shall march on to future ages in acclamations of blessing and triumph. A brief chronological statement of the leading events in the settlement of the Territory, and the organization of a State government, is all that will be attempted.

Kansas was a part of the Louisiana purchase made by Jefferson in 1803, of Napoleon.

By the Missouri Compromise Bill, 1821, it was enacted, that all the territory which lies north of latitude $36^{\circ} 30'$ N. excepting only such part thereof as is included within the limits of the State (Missouri) contemplated by this act, slavery and involuntary servitude, otherwise than in punishment for crime, whereof the party shall have been duly convicted shall

be and is hereby forever prohibited." In May, 1854, by an act of Congress the Territories of Kansas and Nebraska were organized—and in Section 14 of this act it was declared that the Constitution and all the laws of the United States should be in force in these territories except the Missouri Compromise act of 1820—which is hereby declared inoperative and void." This annulment of the Compromise Act, was deemed a great wrong by the free states. The doctrine of *Popular Sovereignty* was held up to appease the intense dissatisfaction. Let the settlers of a Territory decide upon its Constitution. In the same year and occasioned by the virtual repeal of the compromise, the Legislatures of Massachusetts and Connecticut granted charters to Emigrant Aid Societies, whose object was to assist emigrants to settle these Territories, by affording useful information, procuring cheap transportation and by rendering material aid in erecting mills in the new settlements.

A large emigration began to flow in from the free States in 1854. The town of Lawrence was founded by one hundred men mainly from the eastern states. In the same year the "Platte County Defensive Association" was organized in Missouri, "To assist in removing any and all emigrants who go there under the auspices of Northern Emigrant Aid Societies." Much excitement prevailed, and resolutions were adopted in western Missouri in favor of the extension of Slavery into Kansas.

A. Reeder, of Pennsylvania was appointed Governor and arrived in the Territory Oct. 6, 1854. A delegate to Congress was to be chosen Nov. 29. Armed bands from Missouri voted so that out of 2,871 votes cast, it was subsequently estimated by a congressional investigating committee that 1,729 were illegal.

A similar result followed the attempt to elect members to the territorial Legislature in March 30, 1855. Out of 6,218 votes, only 1,310 were legal, of which 791 were given for free state candidates. Gov. Reeder set the returns aside and ordered new elections in six districts. The result was the choice of free state delegates except in Leavenworth, where the Missourians again siezed the polls. Gov. Reeder went to Washington, and on his return found himself removed from his office. The alleged reason—irregular proceedings in the purchase of Indian lands. The Legislature met at Pawnee, July 3, and remained in session till August 30. The free

state men chosen at the second election were expelled, and their seats given to the pro-slavery men originally returned. They passed an act making it a capital offense to assist slaves in escaping into or out of the Territory, and felony punishable with imprisonment at hard labor from two to five years, to conceal or aid escaping slaves, to circulate anti-slavery publications or to deny the right to hold slaves in the Territory; also an act requiring all voters to swear to sustain the Fugitive Slave Law.

Governor Wilson Shannon, of Ohio, was appointed in place of Gov. Reeder. He entered upon his duties September 1, 1855. A little later a free state convention was held at Big Springs. After protesting against the doings of the Legislature, they nominated Ex Gov. Reeder delegate to Congress, and appointed Oct. 9 as the time of holding the election, when Gov. Reeder received about 2,400 votes. At the same time delegates were chosen to a constitutional convention which assembled at Topeka, Oct 23, and sat till Nov. 21. They drew up a Constitution for the State in which slavery was prohibited.

The public mind was so excited that many acts of violence were perpetrated, and several men on each side lost their lives. Lawrence was held in a state of siege for several days by border residents from Missouri. On December 15, the people voted upon the question of the acceptance of the Topeka Constitution. Only 45 votes were cast against it. On January 15, 1856, state officials and legislature under the Topeka Constitution were voted for, and Charles Robinson was elected Governor. The Legislature met at Topeka, March 4, and adjourned to July 4. Early in April armed bands from Georgia, Alabama and other Southern States under Major Buford arrived. On May 5, the grand jury of Douglas county found indictments against Reeder, Robinson and Lane, and other free state leaders for high treason, on the ground of their participation in the organization of a state government under the Topeka Constitution. Reeder and Lane escaped out of the Territory, but Gov. Robinson was arrested and kept in prison for four months. The U. S. Marshal took Maj. Buford's men into pay and armed them with Government muskets. Lawrence was again besieged by a large force, and on May 21, 1856 under promise of safety to persons and protection to property, the inhabitants gave up their arms to the Sheriff. The invaders immediately entered the town, burned

the hotel and Governor Robinson's house, destroyed two printing presses, and plundered several stores and houses. Civil war raged throughout the territory. A fight occurred at Pottawattamie May 26, eight killed. At Black Jack, June 2, Capt Pate, of South Carolina, and thirty men were captured. For several months this state of things continued. The free state legislature assembled July 4, and were forcibly dispersed by U. S. troops, by order of Col. Sumner. August 14, the free state men captured Col. Titus and twenty men near Lecompton. August 17, a treaty was formed between Gov. Shanon and the free state men. A few days later Gov. Shannon was superseded by Governor Geary, of Pa. Before his arrival, acting Gov. Woodson declared the Territory in a state of rebellion. Quite a force, increased by 1,150 men from Missouri under Atchison were collected to quell the uprising of the people. August 29 a detachment from Atchison had attacked Ossawatamie, which was defended by 50 men, who were defeated—2 killed, 5 wounded and seven taken prisoners. Five of the assailants were killed and 30 houses were burned. Atchison's men on the next day retreated before a body of free state men from Lawrence to Missouri.

September 1 several free state men were killed, houses were burned at Leavenworth and 150 persons forced to embark for St. Louis. September 8, Gov. Geary arrived at Lecompton, and Gov. Robinson and the other prisoners were released on bail. Gov. Geary called on all to lay down their arms. He promised protection to the free state men who acceded to his command. The Missourians came over 2,000 strong, and marched to attack Lawrence. Gov. Geary interfered with U. S. troops, and finally prevailed upon them to return.

January 6, 1857, the Legislature elected under the Topeka Constitution, met at Topeka. The U. S. Marshal arrested the President of the Senate, the Speaker of the House and about a dozen of the leading members, and took them to Tecumseh on charge of having taken upon themselves the office and public trust of legislators for the State of Kansas without lawful deputation or appointment. The House on the next day being without a quorum adjourned till June. Soon after this the pro-slavery territorial Legislature met at Lecompton, passed several acts, one providing for the election of members of a convention to frame a State Constitution.

About this time Gov. Geary resigned and left the Territory.

Robert J. Walker of Mississippi, was appointed his successor. The election for delegates to the Constitutitnal Convention was held June 15, 1857. The free state men declined to vote. Only 2,000 votes were polled, though there were 10,000 voters.

At an election held a few months after, the free state men being assured by Gov. Walker that they should be protected, voted so that 7,600 votes were cast, electing M. J. Parrott delegate to Congress, and 9 of the 17 councilmen, and 27 of the 39 representatives. An attempt to neutralize the effect of this election by means of a false return from Oxford, Johnson county, a place of eleven houses, it was affirmed that 1,624 persons had voted, and a corresponding roll of names were sent in, copied in alphabetical order from a Cincinnati directory. This return was rejected by Governor Walker.

The Lecompton Constitutional Convention soon after presented a constitution for the suffrage of the people, only one article to be voted for, viz: "Constitution with slavery," or "Constitution without slavery."

Many of the provisions of the constitution were highly objectionable. No amendment could be made before 1864. Gov. Walker condemned it in the strongest manner and went to Washington to remonstrate against its adoption by Congress. But he found it had already received the approval of the president before his arrival. He resigned, and J. W. Denver, of California was appointed in his place. The free state men generally declined to vote at the election of December 21, 1857, for the adoption or the Lecompton Constitution. 6,143 votes were proclaimed from the precincts along the Missouri border, when there were not over 1,000 voters. The Constitution being thus nominally adopted, an election of officers under it was to be held January 4, 1858. The Territorial Legislature at a special seesion passed an act submitting the Lecompton Constitution to the direct vote of the people on the same day with the Lecompton State election, and the result was a majority of 10,226 votes against it. Congress, after a long discussion referred the matter to the people of Kansas at an election on Aug 3, 1868, when it was again rejected by 10,000 majority. Soon after the territorial Legislature called another convention to frame a constitution which was made and ratified by a large majority. Shortly after the rejection of the Lecompton Constitution, Gov. Denver resigned and Samuel Medary of Ohio, was appointed to his place.

The Territorial Legislature met January 1859, and passed

an act submitting to the people the question of calling still another constitutional convention. The election was accordingly held March 27, and the result was a majority of 3,881 in favor of holding a convention. Delegates were elected and a new constitution formed at Wyandotte, July 27, in which slavery was prohibited in the State of Kansas. This Constitution was ratified October 4, 1859, by 4,000 majority. The long agony was over. The rights of men were secured.

At the first election under this constitution, Charles Robinson was elected Governor. After the inauguration of President Lincoln the battle fought on the prairies of Kansas was fought out for the whole land, and now our flag waves more truly than before, over the land of the free and the home of the brave.

SURFACE.

Kansas may be regarded as a vast plain, diversified on its eastern and northern borders, and sloping from the vicinity of the Rocky Mountains to the eastern boundary. South of the Kansas River the slope is slightly south of east. The mouth of Kansas River is 850 feet above the ocean. The rise is gradual and uniform; for 132 miles it is by rail road report as follows:

Wyandotte to Lawrence, 39 miles,	62 feet.
Lawrence to Topeka, 26 miles,	60 "
Topeka to Manhattan, 50 miles,	120 "
Manhattan to Ft. Riley, 47 miles,	54 "
Average, per mile.	2.25 "
Starting from Atchison to Muscatiah, 25 miles,	164 "
To Big Blue, 65 miles,	153 "
It is about 60 miles from Atchison to Wyandotte by water, allowing a foot descent per mile:	
Big Blue at Irving,	377 "
Big Blue at Manhattan, -	242 "
Rise from Manhattan to Irving,	134 "
Barometrical measurements are as follows:	
Mouth of the Kansas River above the sea,	850 "
Shawnee Mission,	991 "
Olathe,	1,047 "
Tecumseh,	1,234 "
Ft. Riley,	1,459 "
Mouth of Saline River,	1,592 "
Ft. Atkinson, long. 100 °,	2,330 "
Arkansas River, near west line of State,	3,047 "

Rise for first hundred miles about 2 feet per mile.

For second and third hundred miles, 6 feet per mile.

For fourth hundred miles, 7 feet per mile.

The bottoms or river valleys constitute a most important part of the state. The rivers being generally shallow, with banks deep enough to prevent inundation, the adjacent alluvial soil, which is everywhere deep and rich, is especially well adapted to farming. The width of these bottoms varies and is generally greatest on the larger streams. The soil of these bottoms vary in depth from 2 to 50 feet—but usually is from 2 to 5 feet. They are free from swamps and sloughs. The soil is porous and somewhat sandy, and is very easily worked. The water from beneath so percolates laterally that by capillary attraction the ground contains moisture even in time of dry weather, and good crops are secured in seasons that would be unfruitful in stiffer soils. There is little or no waste land in these bottoms. In this respect they differ widely from the bottoms of the more eastern states. The settlements have been principally first made in these bottoms, not only for their productiveness and proximity to water, but also because timber is found only near the river courses.

In passing out of the bottoms there is often a narrow strip of quite rolling country which along some of the streams is so broken and abrupt as to be styled

BLUFFS.

These, in connection with bottom lands, furnish all the variety necessary for varied farming. Fruit and some kinds of small grain can be raised with great success on these bluffs. They also usually contain rock, and springs of never-failing water, and thus the settler can with ease build his houses, barns, stock yards, and farm walls, and have pure water ever at hand. In most parts of the State the rock is so stratified beneath the soil as not to interfere with the cultivation of the land; it crops out on some of the most steep bluffs so as to be visible in the ravines. No State in the Union is so generally and so well supplied with rock, and at the same time so free from its being in the way of cultivating the soil.

Stretching off from the bluffs and covering the divides between the rivers are the

PRAIRIES AND PLAINS.

In the eastern part of the State the general features of these prairies are as beautiful and magnificent as can be conceived of. They are entirely different from the flat, monotonous prairies of large portions of Illinois. They excel most of the prairies of Iowa in being free from swamps and sloughs, while in depth of soil and productiveness they are not surpassed by upland prairie in any of the States in the Mississippi valley. This is saying much, but the average crops of the last ten years will bear out the statement. In the north-eastern counties, Brown, Doniphan, and Atchison, the surface is quite rolling. The soil is rich and of a mulatto color. In the northern counties, west of these, to the Republican river, the land lies more gently rolling, and for the general purposes of grain growing and stock raising it is not surpassed in the State.

In the central counties on each side of the Kansas river, the prairies are finely rolling, and become more level as we advance westward. The tributaries of the Kansas are usually of sufficient distance from each other to afford divides wide enough for very broad prairies. The soil is deep on the summits, and seems to be nearly as rich as the bottom land. The soil is thinnest on narrow divides, which are cut by frequent ravines.

In the interior of the State the face of the country becomes more flat and uninteresting, except as a hunting ground for buffalo. The stunted but nutritious buffalo grass grows on the vast plains west of Fort Hays. The prairies approach as a general thing nearer the Kansas river than on Platte river, which runs nearly parallel in Nebraska. The appearance of the country is more varied in Kansas. The timber in the eastern part of the State of Kansas is more abundant and of better quality than in most parts of Nebraska.

In the eastern counties, south of the Kansas river, there is quite a variety of surface, but generally very rolling. In Linn county there are many mounds of great extent and beauty. It would be difficult to find in any prairie country a more picturesque region than in passing from Fort Lincoln to Paola. The summits of many of these mounds is of sufficient extent for many large farms, and what is quite surprising, water is often found in abundance, while beneath, in the valleys it is found much deeper below the surface. The prairies

in Bourbon county are rolling and ridgy. Loose stone is excessively abundant on the surface of many of the ridges. In Crawford and Cherokee counties, the loud praised neutral lands, the general appearance is very fine. In the first named county the land is magnificently rolling, but scarce of timber. In Cherokee fairly rolling, but in the southern part there is more bottomland on the Neosho and Spring rivers, which flow across the south-west and south-east corners.

The southern counties west, as far as the sixth meridian, are all, as to surface and soil, well adapted to farming. The general features of the prairies, as you proceed west, is gently rolling, some are level; but all are free from marshes and sloughs.

Of the vast plains in central Kansas it is not necessary to speak, for until the lands east, more rich and more desirable, are occupied, few emigrants will ever think of going to a country where irrigation would be necessary to render crops abundant or reliable.

On the whole, Kansas, for two hundred miles west of its eastern boundary, may be said to be as fine a prairie region as can be found in the United States. The surface is as favorable as any equal portion of our country for farming with machinery, and for grandeur and magnificent proportions no region, unless it be eastern Nebraska, can equal it. There being no mountains, and very little rough or broken country in the state, it is easy to travel in any direction in the unsettled portions. Persons wishing to examine the country would do well to have their own conveyance, as then they can go in any direction, and avoid the great expense of livery establishments.

RIVERS.

The most important river is that after which the State is named, and if the Smoky Hill river is considered as a part of it, it is the longest river within the State. The Kansas river is so called as far west as Solomon's Fork. It is not as wide as the Platte, neither has it so swift a current. It is deeper, and at times is for a short distance, navigable. It is a more interesting river to the traveler, partly because there is more timber and shrubbery on its banks, and also because the bottoms are narrower, and in consequence there is more variety of land scenery. Bluffs often approach near the river, and rocks crop out, making the country seem more like the river regions to

the eastward. The principal tributaries to the Kansas river on the north are—*The Stranger*, which heads in Atchison county, and runs due south. This is not a large stream, but is well timbered. The next—

The Grasshopper, a more important stream, which rises in Nemaha and Brown counties, in the north part of the State. Its course is nearly south, and it empties into the Kansas river, between Topeka and Lawrence. For Kansas it is well timbered. The country along this river is becoming well settled. It flows through the noted Kickapoo reservation, which is now being settled by whites. The Soldier, Cross, Red Vermillion and Rock rivers are small streams which flow south into the Kansas, east of the

Big Blue river, which, though not one of the largest, is yet perhaps the most interesting river in the State. This river rises near the Platte, in Nebraska, flows a little east of south, enters Kansas in the Otoe Reservation, in Marshall county, and flows nearly one hundred miles in Kansas, before it empties itself at Manhattan, in the Kaw or Kansas river. This river is mainly fed by springs, and flows steadily through the dry season. It has beautiful bluffs on each side, which contain magnesian limestone rocks, which crop out so as to be distinctly visible at many points, yet not so as to impair the beauty of the varied forms and deep verdure of the sides. The channel is usually deep cut, and the water of a clear sky-blue tint; beautiful groves skirt the stream, and the current is swift. Opportunities for good mill sites are frequent, and building rock of excellent quality abounds, also Gypsum.

At Marysville the proprietor of one of the largest flour mills in the State tried the experiment of covering the roof with plaster obtained from gypsum rock near by. The experiment did not prove a success, as the hard finish cracked badly. The value, however, of these rocks must be great, when, by the usual manner of exhausting land, there shall be need of a coat of plaster to fertilize the soil.

The Republican. This noted river rises not far from Denver, in Colorado, and enters the State about one hundred and thirty miles west of the Missouri. It flows over a hundred miles in Kansas, and empties into the Kansas river at Fort Riley. In its main characteristics it resembles the Kansas river. It has many tributaries on each side, and these cut up the country so that the bottoms are quite different from the level and everywhere arable valley of the Platte, in Ne-

braska. The soil on this river is very rich, and the abundance of the grass and the varied surface render this the chosen haunt of countless herds of antelope, deer, and buffalo, and hence, from time immemorial, the Indians have made the Republican their favorite hunting ground. It will be no easy matter to remove them so that they will not return to pursue their noble game.

The Solomon and *Saline* rivers are important streams, running nearly parallel with the Republican, and entering Kansas river within seventy miles of Fort Riley. The valleys of these rivers are noted for their fertility. West of the outlets of these rivers is the—

Smoky Hill river, which enters the State from Colorado, and flows due east in the State over a hundred miles, and then makes a sharp bend south, and then north in Ellsworth, McPherson, and Saline counties. The Union Pacific Railroad (eastern division) passes up the valley of this river for quite a distance. The country is arable as far west as Russell county, but from that region westward the stunted buffalo grass betokens a country too dry to be cultivated, unless artificial irrigation is resorted to. There are no settlements worth naming west of Ellsworth station. There the wild Indian and his game are the only denizens. The cars run through this region, but until they pass to inhabitants that dwell beyond these naked plains, they run to no profit, and the curiosity of sight seers is soon gratified. In the wide-spread solitude the traveler feels relief in the thought that the iron horse will soon bring him back to the abodes of civilized man.

South of the Smoky Hill river, is the *Arkansas* river, which enters the State from Colorado, on the 38° north latitude, and courses in a south-easterly direction, and passes out of Kansas into the Indian Territory in Cowley county, about a hundred and twenty miles west of the eastern boundary. As this large river is mainly west of that part of the State which is of interest to the emigrant, little need be said.

In south-eastern Kansas the principal rivers are—

The Wakarusa, which rises near the Kansas river, in Wau-bansee county, and flows nearly due east through Shawnee and Douglass counties, and empties into the Kansas about twelve miles east of Lawrence. The valley of this river is noted for its deep black soil. There is a good supply of timber, and some of the best farms in the State may be found between this river and the Kansas. South of this is—

The Marias Des Cygnes, which becomes the Osage river. This is a fine river, well supplied with rock, its margin is well timbered. This, with its numerous affluents, passes through a prairie region of unsurpassed variety and beauty. Settlements have been made both on the valleys and uplands, and all seem to be in a highly prosperous condition. South of this are the *Large* and *Little Sugar* rivers, and the *Marmiton*, a small stream through Bourbon county. This is well timbered, and abounds in rock.

Spring River, a noble, clear stream, flows from Jasper county, Missouri, through the south-east corner of the famous Cherokee lands. This stream abounds with fish, flows over a rocky channel, and is skirted with good timber.

The Neosho courses diagonally through south-eastern Kansas. This is one of the finest rivers in Kansas, or rather so considered, in respect to its surroundings. Its timber is abundant, and of excellent quality. The soil, both in the bottoms and prairies adjacent, is first class. There is coal to be found at convenient distance, and the climate is very mild, and well adapted for growing the more tender varieties of fruit.

The same may be said of the *Verdigris* river, which flows parallel, and is shorter and smaller. Settlers are rapidly occupying the regions on both of these favored streams.

Last and greatest, the—

Missouri river flows with its troubled, turbid flood along the north-eastern border for nearly two hundred miles. This is the only stream that in an import sense may be said to be navigable. It is a difficult and dangerous river. Its ever-changing channel, its swiftness, all combine to make it so. The staunchest boats and most experienced pilots are needed to do business on its waters. But its valley is the richest and best adapted for agriculture in the Union. Not even the world-renowned valley of the Mississippi can equal it. Equally rich bottoms there may be, but such a universal excellence of both bottom and prairie land cannot be found in equal extent on any other river. It rises in mountains filled with gold; but richer far the regions through which it flows, gleaming with the golden corn and the broad grain fields.

The State of Kansas is remarkably well watered. Not only are there many streams of large size coursing through each part, but the tributaries of these form a complete net-work of ever-running streams, which afford great advantage to the farmer and stock raiser. In most parts the smaller streams

have their source in unfailing springs, and thus the water is cool, and the supply not likely to fail in a dry time. During the present summer, which was very hot and dry in the part where the drouth was the severest, most of the streams afforded water in abundance for stock. The small streams generally flow in narrow and deep-cut channels, and are not unfrequently concealed by the rank vegetation, so that the traveler often finds himself on the very verge of a rivulet before he is aware. They rarely flood the country, and in no part of our country, except Nebraska, which in this respect is like Kansas, is there so little waste land.

Fish abounds in many of the rivers. For commercial intercourse the interior is destitute of navigable streams.

WELLS.

In most parts of the State so far as settled, well water is abundant and easily obtained. Ordinarily it is found at from fifteen to thirty feet. In many parts no rocks obstruct the digging. So far as came under the observation of the writer, the water was clear, and free from unpleasant mineral taste, except in some parts of the south-eastern counties. The water there, in certain localities, seems to be impregnated with sulphate of iron. It may not be unwholesome, but to persons unaccustomed to it is disagreeable, especially in warm weather. Most of the well water is hard. As a whole, the eastern half of the State is very highly favored in this most important matter. For certainly no one thing conduces more to render a country, and especially where long warm seasons prevail, desirable, than an abundance of good water. In many parts springs flow out from the sides of bluffs and ravines, and in places not a few they burst forth upon the gently rolling prairies.

SOIL.

In speaking on this subject, reference will be had to soil in the eastern half of the State. It may be stated, in general terms, that no region, unless it be in adjoining States in the valley of the Missouri, equals, and none surpasses, this for general excellence. The soil, both in the valleys and on the uplands, is uniformly of good depth, in most parts of unusually good depth. There are some small regions where there is an exception, as on some of the ridges of the south-eastern

counties. In passing over the stony ridges in some parts of Bourbon county, and some other counties, the presence of a peculiar weed discloses the fact that the soil is shallow, and underlaid by solid rock. So in the north-western part of Pottowattomie county there are hills and ridges so full of flint stones as to interfere with cultivation, and to seriously detract from the fertility. So also in other counties there are small spots where the presence at the surface of small sand stones of brown and reddish hue, give warning that the soil is inferior. But aside from these exceptions, there is a wonderful amount of first-class land. The soil is easily worked, and does not retain water on the surface after heavy rains. The rolling nature of the prairies also aids in the matter of drainage. There are no marshes, sloughs, or excessively wet and sour land. The land is not liable to bake and become lumpy in a dry time after heavy rains. It is also sufficiently sandy to scour ploughs well. In fine, it is warm, workable, and possesses the ingredients necessary to produce the grain and vegetables belonging to the temperate zone in the greatest profusion. Another peculiarity is, that however deep the plough may go, the subsoil, upon exposure, seems to become as fertile as the darker soil near the surface.

On this subject, in addition to what will be said in the article in this book on the Geology of Kansas, the writer would condense from the report of Professor Swallow, the following: The best classification of soils is based upon the proportion of Silica, Alumina and Lime. A large proportion of the soils of Kansas are composed of these three earths in such proportions that is difficult to say which prevails. This is the case with nearly all of those founded upon the "Bluff Formation." If such a soil have an abundance of decayed animal and vegetable matter, and depth enough, it will be all that could be desired. And this is precisely what we have in Kansas.

The prevailing upland soil is a fine, sandy mold of the following chemical composition:

Silica,.....	77.02
Alumina and per Oxide of Iron.....	11.05
Lime.....	3.25
Potassa.....	1.05
Magnesia.....	1.63
Carbonic Acid.....	2.83
Water.....	2.43
Loss.....	74

100.00

This composition gives the ingredients most desired to form the basis of a soil and its sub-soil; as the soils formed by mixing with them a sufficient quantity of organic matter will be strong, light, warm, or in common parlance, kindly, rich, soil. The organic matter will supply the phosphorus, ammonia, sulphur and humus needed for the sustenance of the crops. The clay and magnesia, lime and humus will give the soil great power to absorb moisture, and the humus and magnesia great capacity for retaining it.

This Bluff Formation underlies the soils in nearly all the highlands of eastern Kansas. In all the eastern tier of counties from Doniphan to the Indian Territory, in Jefferson, Jackson, Shawnee, Douglas, Franklin, Anderson and Osage, and portions of Coffey, Lyon, Wabaunsee, Brown, Nemaha, Riley, Greenwood and Butler.

Throughout the whole belt of country occupied by the gypsum-bearing marls of the permian systems, the soils of the valleys and slopes, and even many of the highest ridges are wonderfully productive. As in the valleys of the Smoky Hill, and on Gypsum Creek, and the head Waters of the Big Blue. In all this region the prairie grasses are very luxuriant and often grow very thick and to the height of eight or ten feet. The bottom prairie produces a light, rich, silicious soil, and is particularly adapted to corn, hemp and wheat. The drift, when it lies near the surface, fills the soil with sand, pebbles and boulders. The brown flint pebbles and boulders which sometimes appear on the ridges, are from the drift. These very much injure the soil; but fortunately they occupy only a very small area in the entire state.

THE COAL MEASURES

Produce a varied effect, but the thick, bluff deposit which covers nearly all the coal strata in the State, prevents deleterious effects. Some of the very best soils in the State overlie the coal measures. Such are the soils of Kansas. Though lying abjacent, on the east and north, to the finest and richest agricultural regions of the continent, Eastern Kansas suffers nothing in the comparison for a most beautiful and productive country.

NATURAL SCIENCE OF KANSAS.

The following brief summary of the Geological Surveys of Kansas, was prepared by JOHN D. PARKER, Ph. D., B. D., Professor in Lincoln College, Topeka, Ks. :

SURVEYS.

The Geology of Kansas has been investigated under the auspices of the State Government, first by B. F. Mudge, A. M., Professor in the Kansas State Agricultural College; thereafter by Prof. G. C. Swallow, assisted by Major F. Hawn, C. H. Logan, M. D., and Tiffin Sinks, M. D.

TOPOGRAPHY.

The surface of the State is chiefly undulating, rolling in the eastern portion, more level in the middle, and broken as we approach the mountains towards the west.

The principal streams flow from west to east, bordered on each side by wide terraces which lead back to the high prairie land. The margins of nearly all the rivers with their affluents are bordered by timber, which is sufficiently abundant in the eastern portion of the State for all practical purposes, but rapidly diminishes after passing the junction of the Republican and Smoky Hill rivers, towards the west, both in quality and quantity.

The natural drainage of the State is almost perfect. This is partly effected by the general undulations of the surface and the nature of the soil, which rapidly absorbs all deposits of moisture, and partly by the gradual rise of the land from its eastern border—about 900 feet above the level of the sea—towards the west at an average ascent of about three feet to the mile. By virtue of this inclination, the streams have rapid currents from west to east seldom overflowing their alluvial bottoms. There is also an entire absence of swamps and marshes throughout the entire State.

GEOLOGY.

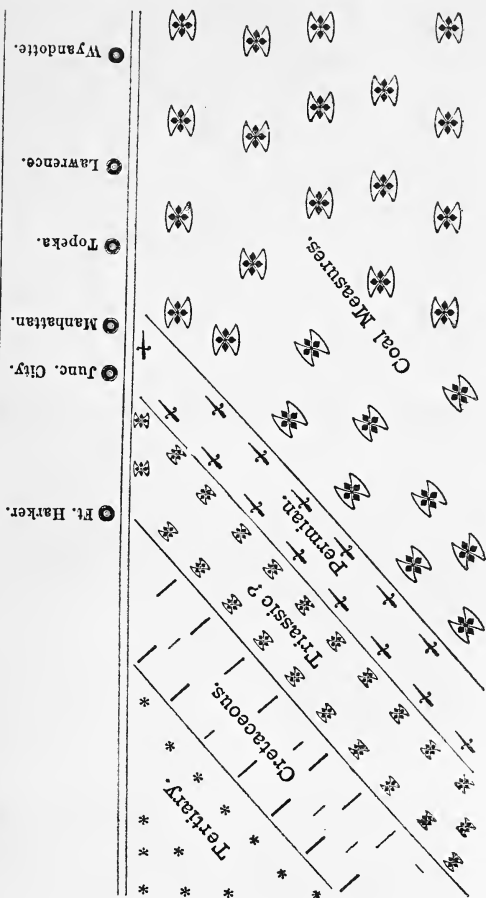
Kansas occupies an interesting position in the geological development of the American Continent. According to the general law, North America has its elevated mountain borders, and a low or basin-like interior. The Appalachian chain of

mountains was heaved first from the briny deep. The continent then had a slow uplift, raising the surface gradually above the ocean level from east to west, until the Rocky Mountain chain at length broke through the thickening strata and shoots its peaks by virtue of the pent up gasses far above the general level. Our State thus lay a long time beneath the briny deep after the surface of the land east of the Mississippi river had been lifted above the ocean level. We have, therefore, a very full development of nearly all the rocks from the lower carboniferous upward. Starting at the south-eastern border of the State, we cross the edges of these out-cropping strata as we pass north-west toward the Rocky Mountains. The rocks of Kansas have been divided into six geological systems as represented in the table on page 22.

Tabular View of the Geological Formations in Kansas

Periods.	Epochs.	Age.	Rocks in Kansas	Thickness.
Past Tertiary.		Man.		
Tertiary.	Pliocene.	Mammals.	Not yet examined.	
	Miocene.			
	Eocene.			
Secondary.	Cretaceous.	Reptiles.	Cretaceous.	295
	Jurassic.			
	Triassic.		Triassic.	338
Plaeozoic.	Permian.	Coal Plants.	Upper Permian.	141
	Carboniferous		Lower Permian.	563
			Coal Measures.	2000
	Devonian.	Fishes.	L'r Carbonifer's.	150
	Silivian.	Mollusks.		
	Cambrian.			
Azoic.	No Animals.			

Ideal Section of the Rocks of Kansas, from East to West, along the Line of the Kansas River.



The following nomenclature has been adopted in the last report of the Geological survey of the State :

SYSTEM I.—QUARTENARY.

ALLUVIUM.

Soil everywhere, from 1 to 6 feet.

Sand-bars—Missouri and Kansas rivers, from 20 to 30 feet.

River bottoms, humus, all streams, 20 to 30 feet.

BOTTOM PRAIRIES.

Sands, clays and marls, 25 to 30 feet.

BLUFF.

Silicious marls and sands on all the highlands under the soil, 1 to 150 feet.

DRIFT.

Sands, pebbles and boulders, 1 to 2 feet.

SYSTEM II.—TERTIARY.

In Western Kansas, but not yet examined.

SYSTEM III.—CRETACEOUS.

In central Kansas,—but partially examined, 295 feet thick.

SYSTEM IV.—TRIASSIC ?

338 feet thick.

SYSTEM V.—PERMIAN.

141 feet in thickness.

LOWER PERMIAN.

563 feet in thickness.

SYSTEM VI.—CARBONIFEROUS.

COAL MEASURES.

Upper Coal Series, 391 feet in thickness.

Chocolate Limestone Series, 79 feet in thickness.

Stanton Limestone Series, 74 feet in thickness.

Cave Rock Series, 75 feet in thickness.

Saring Rock Series, 88 feet in thickness.

Well Rock Series, 238 feet 6 inches in thickness.

Marais Des Cygns Coal Series, 303 feet in thickness.

Pawnee Limestone Series, 112 feet 6 inches in thickness.

Fort Scott Coal Series, 142 feet 10 inches.

Fort Scott Marble Series, 22 feet 8 inches.

Lower Coal Series, 353 feet in thickness.

LOWER CARBONIFEROUS.

120 feet in thickness.

ECONOMIC GEOLOGY.

The nature and cultivation of the soil determine to a great extent the character of a people. All soils are formed by secondary causes from rock. Soils are distinguished into three general classes, viz: Silicious, Argillaceous and Calcareous, according to the three principal subsistences of which they are composed predominate. Many of the soils of Kansas unite sand, clay and lime in such proportions that it is difficult to tell to which class they belong. But as the character of the soil is determined by the underlying rock being distinguished from it, the limestone which underlies a large portion of the State mixed with the accumulating vegetable mold, gives it a light, warm and productive soil. The soil of our river terraces is generally light, rich and silicious, and is well adapted for the abundant growth of cereals which are little affected by drouth. The soil of the high prairies has suffered by comparison with the rich alluvials and has, we think, been underrated. Although eastern Kansas lies contiguous to one of the richest agricultural districts on the east, yet it suffers nothing by the comparison. This is proved by the abundance of the finest timber and grasses, and by large crops of all the cereals common to this latitude.

COAL.

The coal-bearing rocks of Kansas are about 2,000 feet in thickness, and cover an area of over 17,000 square miles. There are 22 distinct and separate beds; ten of them ranging from 1 to 7 feet in thickness, making an aggregate thickness of over 25 feet. There are outcroppings of coal in 20 counties. The quality of the coals of Kansas is to a large

extent good, being free from sulphur and other impurities so common in other states. Large beds of Lignite, or Brown Coal, are reported to exist in the western part of the state.

SALT.

There are large deposits of salt in the state, and the manufacture of salt is carried on to some extent. Salt works have been established at Ossawatimie from which an excellent article is produced. It is supposed that at no great distant day Kansas will manufacture a large amount of salt for exportation.

GYP SUM.

Gypsum, or sulphate of lime, exists in the western part of the state in large quantities. Beds of it occur from 1 to 10 feet in thickness. At Gypsum Creek a massive bed occurs about 16 feet in thickness. These plaster beds will enable the farmer to fertilize the sandy ridges of western Kansas to any extent desirable.

LIMESTONE.

Limestone of the finest quality occurs in abundance in nearly all portions of the state. In a large part of the state it crops out on nearly every farm, affording material for stone fences and buildings. When properly burnt it produces excellent lime. Marble, a fine variety of limestone, also occurs in some places.

WATER.

The whole area of the state is well supplied with streams of living water. Springs are of frequent occurrence and wells can be sunk into the underlying limestone and sandstone and pure water be obtained.

TIMBER.

Kansas is supplied in its eastern and central portions with sufficient timber for all practical purposes. Along all the rivers and creeks are belts of timber from a few yards wide to several miles. Since this portion of the state was settled, and the annual fires have ceased, the breadth of timber is rapidly increasing. In the western portion of the state there is great destitution of timber, and it is of inferior quality.

FRUIT.

Nearly all the varieties of fruits which are raised in the older states, are doing well in Kansas. Peach orchards are this year producing from four to five thousand bushels of peaches. Farms cultivated for thirty years have produced well every year except the year of 1860.

TIMBER.

In addition to the above article the writer would add: The timber of Kansas is found along the water courses. In most parts of eastern Kansas there is a moderately good supply. Since settlements have been made, and prairie fires have been kept down, young forests are growing up rapidly. The abundance of good coal in most parts supplies fuel, and the rock furnishes material for houses and enclosures. In addition to this, the mildness of the climate renders it less necessary for the comfort and general prosperity that there should be much timber.

On the Missouri, the Big Blue, the Arkansas, Neosho, Spring River, Marias Des Cygnes, Wakarusa, and the Kansas rivers, there is much valuable timber. Owing to the immense swells of the prairies, the country appears to the traveler much more destitute of timber than it really is. The timber is of moderate height, and lies hid in the deep depressions, so as to be out of sight, even when not far off. There is no doubt that the growth of hedges and artificial forests will do much to counteract the unpleasant effect of strong winds, and also to modify climatic conditions, so as to render the country less liable to the evil effect of extreme dry and hot weather. The State has voted very liberal bounties to those who grow hedges and forests:

An Act to encourage the growth of Forest Trees. Approved February 15th, 1866.

SECTION 1. Every person planting one acre or more of prairie land within ten years after the passing of this Act, with any kind of forest trees and successfully growing and cultivating the same for three years, or one half mile or more of forest trees along any public highway, said trees to be planted as to stand, at the end of said three years, not more than one rod apart, shall be entitled to receive for twenty-five years, commencing three years after said grove or line of trees has been planted, an annual bounty of two dollars per acre, for each acre so planted, and two dollars for one-half mile, for each half-mile so planted, to be paid out of the Treasury of the county in which said grove or line of trees may be situated.

The bounty to be paid so long as said grove or trees are cultivated and kept alive, and in growing condition.

That the County Assessor shall not assess lands planted and encumbered with forest trees any higher than the lands adjoining, on account of the said lands being so encumbered.

The following are the most important varieties of trees:

- Black Jack Oak—*Quercus Nigra*.
- White Oak—*Quercus Alba*.
- Red Oak—*Quercus Rubra*.
- Burr Oak—*Macrocarpa*.
- Black Oak—*Tinctoria*.
- Water Oak—*Aquaticna*.
- White Elm—*Ulnus Americana*.
- Red or Slippery Elm—*Ulnus Rubra*.
- Black Walnut—*Juglans Nigra*.
- White Walnut—*Juglans Cathartica*.
- Cottonwood—*Populus Canadensis*.
- Box Elder—*Negrundo Aceroids*.
- Hackberry—*Celtis Occidentalis*.
- Honey Locust.
- Willow—*Salix*.
- Shell Bark Hickory—*Carya Squamosa*.
- Pignut Hickory—*Carya Porcina*.
- Pecannut Hickory—*Carya Olivaformis*.
- Sycamore—*Platanus Occidentalis*.
- White Ash—*Fraxinus Americana*.
- Sugar Maple—*Acer Nigrana*.
- Red Mulberry—*Morus Rubra*.
- Linden—*Tilia Americana*.
- Crab Apple—*Malus Coronaria*.
- Wild Cherry—*Cerasus Serotina*.
- Osage Orange, or Bois D. Arc.

SHRUBS AND VINES.

- | | | |
|---|---|-------------|
| Elder | Shoemake, or Sumach | Green Brier |
| Gooseberry | Hazel | Pawpaw |
| Prickly Ash | Raspberry | Blackberry |
| Prairie Rose | Grape of several varieties, some very good. | |
| The Wild Sunflower abounds in the greatest profusion. | | |

F E N C E S .

In the eastern counties the farms are mostly enclosed by

rails and boards, some by hedges, some by wire fence, and in south-eastern and central Kansas by walls. Stone walls can be put up in many parts with very little expense, from \$1.50 to \$3.00 per rod, as the rock is easily obtained at or near the surface. The climate of Kansas is very favorable to the growth of the Osage Orange ; a good hedge can be grown in four years. The opening of railway communication with south-western Missouri and the Indian Territory on the south, will aid immensely in supplying sawed lumber at easy rates. At the present time, Oak, Walnut, and Cottonwood lumber, can easily be obtained at moderate rates. Pine lumber has to be transported from the Mississippi river, except on the south of the State, where it is obtained from Missouri and the Indian country.

BUILDING MATERIAL.

Kansas lumber costs from \$20 to \$40 per *M* at the mills, pine lumber at \$50 to \$90, shingles cost from 7 to 11 per *M*. Brick can be had at from 7 to 10 per *M*. Good rock is easily obtained in most parts of the State, and no new part of our country has so large a proportion of stone houses as Kansas, and many of them of very fine appearance.

COAL.

In addition to what has been said, it may be remarked that the coal of south-eastern Kansas is much of it of very superior quality. It is often found at the surface of the ground, and in strata from two to eight feet thick. It is sold at from 5 to 12½ cents per bushel in regions where it abounds.

COAL OIL.

There are indications of this in many parts of the State, especially in the south eastern ; sand stone is found saturated with it. There are also large deposits of asphaltum. Tar Springs have long been known in Kansas. Nearly all the petroleum found is of the dark, thick, heavy variety known as lubricating oil, which is more valuable than the thin amber-colored varieties which also have been seen.

STAPLE PRODUCTIONS.

Wheat, corn, oats, barley, rye, buckwheat, sweet and com-

mon potatoes, sorgho, pumpkins, turnips, melons, tobacco, flax, hemp, cotton, and all kinds of garden vegetables do well. There have been good crops in Kansas since the exceedingly dry season of 1860. In some strips of the State the extraordinary heat and dryness of July and August of 1868 rendered the later crops poor—the wheat was fair. In most parts of the State there are fair crops this year. The productiveness of the Kansas soil may be seen by examining the reports made by the U. S. Commissioner of Agriculture.

It appears that Nebraska and Kansas (these two States are very much alike in fertility) lead all the States in the yield per acre of wheat, and corn and oats. The average of wheat in Kansas for 1865 was over 24 bushels per acre. Many fields yielded 40 bushels of spring wheat to the acre. In southern Kansas winter wheat is raised with good success. Corn often yields from 40 to 100 bushels per acre. Common potatoes generally yield well, and are of fair quality. The sweet potato yields well, and is of excellent quality. All vegetables thrive well that grow in the temperate zone.

I. E. Bruce raised, in 1868, 1400 bushels of wheat on forty acres, or at the rate of 35 bushels per acre; he netted \$2000 on that one crop. John H. Wilhite raised (1868), by actual measurement, on ten acres, 583 bushels and 22 lbs. of clean wheat, or nearly 60 bushels per acre. Judge R. J. Harper left at the office of the *Manhattan Standard* a sample of sweet potatoes of his own raising, the largest of which measured 22 inches in circumference, and weighed 5 lbs. 8 oz. One of 5 lbs. 1 oz. was raised in Pottowattomie county, 1868. Mr. Whedon, of the Wakarusa, has raised, this dry, hot season (1868), eight acres of corn that will yield 65 bushels per acre, and two acres that will yield 200 bushels per acre. Mr. George Lambenson, of Monrovia, raised on fifty acres 2000 bushels of wheat, which he sold at \$2 per bushel. Robert Blake, of Waubensee, raised (1868), on thirty-two acres, 500 bushels of wheat, and 2500 bushels of potatoes.

POPULATION AND PRODUCTS OF KANSAS, 1867.

The following is from Surveyor General Sleeper's report, prepared for the interior department:

Estimated population of Kansas.....	300,000
Number of acres improved	2,000,000

Live stock.	No. of head.	Price per head.	Total.
Cattle -----	1,000,000-----	\$25-----	\$35,000,000
Horses -----	150,000-----	50-----	9,000,000
Mules-----	10,000-----	100-----	1,000,000
Hogs-----	1,000,000-----	5-----	5,000,000
Sheep-----	100,000-----	3-----	300,000

Total value of live stock ----- \$40,300,000

Grain, &c.	No. of bushels.	Price per bushel.	Total.
Corn-----	40,000,000-----	50 cts. ---	\$20,000,000
Wheat-----	2,500,000-----	\$1.75-----	4,375,000
Potatoes --	1,000,000-----	1.00-----	1,000,000
All other products -----			10,000,000

Total value of crops of 1867---- \$35,375,000

Total value of farm and agricultural
implements ----- \$40,000,000

FRUIT.

Wild fruit is abundant for a country so open. Grapes of superior quality are found along the streams in the timbered regions. Wild plums also abound. Most varieties of the small fruits are found. Great success has attended the efforts made to grow choice varieties of grapes and peaches. The southern half of the State bids fair to rival the best fruit-growing regions in our country. The climate is genial, the warm season is long enough to mature all varieties, the sky is clear and dry, so that the most important conditions for superior fruit here exist. Peaches were exceedingly abundant in 1868—grapes also—the Concord, Delaware, and Catawba, all do well. Until apple orchards reach bearing age fruits of this sort can easily be obtained from the adjacent counties in Missouri. Great quantities were hauled into Kansas from Missouri in 1868. Melons and squashes and tomatoes grow to great size, and are raised with great ease. Mr. Harvey Allen raised in 1868 a quantity of large peaches, one measured $10\frac{1}{2}$ inches in circumference, and weighed $9\frac{1}{2}$ ounces.

CLIMATE.

As might be expected from the latitude, the climate is mild, as compared with more eastern climates it is dry, and yet in

eastern Kansas this peculiarity is not excessive, and does not ordinarily interfere with the growth of good crops. Meteorological observations have been made at all the military posts since 1819, or for a half century. The observation of rain-fall were commenced in 1836. By a comparison of these records, we can arrive at the best possible understanding of the relative and actual state of the case:

	Spring.	Summer.	Fall.	Winter.	Year.
Ft. Leavenworth, Ks.	53.76	74.05	53.66	29.76	52.81
Ft. Riley, Ks.	55.85	79.12	56.09	27.98	53.47
Ft. Scott, Ks.	54.75	74.95	55.27	32.93	54.48
St. Louis, Mo.	54.15	76.19	55.44	32.27	54.51
Cincinnati, Ohio....	53.80	73.70	53.60	33.80	53.70
Pittsburg, Pa.	48.97	71.47	51.43	30.59	50.86

The extreme variations in the spring months are great. This no doubt is owing mainly to the influence of the plains. The winds sweeping down the rocky mountains are unopposed in transit across the intervening country. After a warm day in spring a very cold one may succeed, when a strong wind from the west sets in. Fruit growers would therefore do well, by mulching or by planting on the northern exposures, to retard the spring growth of fruit trees and vines. This accords with the experience of fruit growers in western Missouri. Orchards in that region upon high northern exposures are not only more hardy, more productive, and longer lived, but also more certain to produce each year than when southern exposures are selected. The limiting period for frosts in Kansas is the last of May, though they rarely occur after the 15th.

SUMMER TEMPERATURE.

The isothermals of 70° and 75° include the States of Nebraska, Iowa, Illinois, Indiana, Ohio, Kentucky, Upper Tennessee, Virginia, Maryland, Pennsylvania, and New Jersey. The State of Kansas shows a little higher temperature than any of these. The arid plains south-west of the Arkansas river tend to produce this result. Their influence in heating the air is often felt as far east as the Mississippi river. Hot winds of long continuance sweep along from the south-west with withering influence. The summer of Kansas usually has four months rather than three. The mean temperature for Sept. 1865 did not fall at any time below 70°.

In **AUTUMN**, ordinarily, there is less variable weather, yet in November very sudden and considerable changes often occur. Destructive frosts do not often occur till after September.

In **WINTER** the variations in temperature are often sudden, but the winters are not continuously cold. The mercury rarely remains at or below zero for a longer period than three days.

In all essentials the climate of Kansas is the same as that of the more eastern States in the same latitude, viz: Missouri, Southern Illinois, Indiana, and Ohio. The growth of timber, hedges, and orchards, will no doubt ameliorate the tendency to extreme hot and cold weather, as the State becomes more thickly settled.

R A I N .

The extraordinary drouth of 1860, which prevailed over the entire State, has occasioned a wide-spread misapprehension of the real state of the case as relates to the danger from want of rain. It is by many supposed, that severe drouths are to be expected very often. Let us examine the tables, and see how the case really stands for a long term of years:

RAIN FALL IN INCHES.

	Spring.	Summer	Fall.	Winter.	Year.	No. Years
Ft. Leavenworth, Ks.	7.32	13.03	7.57	3.42	31.34	30
Ft. Riley, Ks. -----	5.62	10.68	5.87	2.72	24.90	5
Ft. Scott, Ks. -----	12.57	16.37	8.39	4.79	42.12	10
St. Louis, Mo. -----	12.30	14.14	8.94	6.94	42.32	19
Pittsburgh, Pa. -----	9.38	9.87	8.23	7.48	34.96	18
Cincinnati, Ohio.	12.14	13.70	9.90	11.15	46.89	20

The aggregate amount of rain fall in Kansas, as compared with the more eastern States, is about one-fourth less. But it is worthy of notice that the winter months show the main relative deficiency, and as this occurs during the absence of vegetation, it is of no great practical importance; there is decided positive advantage; roads are usually dry and in fine condition for hauling grain to market in the winter season. The advantage to the stock raiser in the condition of his herd, must be at once apparent. The grass on the prairies is not so much injured as would be the case if there were more rain in winter. The maximum amount of rain in the average occurs in the months of May and June, when most needed for agricultural purposes. The amount of snow that falls is usually very

slight, and it remains but a short time. The mean annual rain fall in eastern Kansas is 32.78 inches, in western Kansas 24.00 inches. The mean for Minnesota is 30 inches, for Wisconsin 32 inches, and for Michigan 30 inches. Dr. Sinks, whose report, printed in Prof. Swallow's Geological Report, is well worthy of perusal, remarks that the drouth of 1860, occurring as it did, when even under the most favorable circumstances, the productions were not equal to the demand, cast a doubt on the agricultural capacities of the State. A false notion, once adopted, is clung to with pertinacity, for the reason that but few will take the trouble to investigate for themselves. In 1860 the relative deficiency of rain was quite as great in southern Missouri, Arkansas, and western Tennessee, as in Kansas. While a drought is by no means a desirable occurrence, an excess of rain is equally injurious. The general proposition that the whole Mississippi valley is more damaged in its grain and root crops by an excess of rain than from a deficiency, will scarcely be questioned. As compared with that of the States of Ohio, Pennsylvania, and Kentucky, the soil of Kansas requires less measure of rain to develope its full productiveness.

The following is from Prof. Swallow's valuable geological survey of Kansas:

"The State has the temperature of Delaware, Maryland, Virginia, Kentucky, and Missouri.

"The climate is extremely pleasant and healthful. It has been feared by some that Kansas is more subject to drought than the older States in the Mississippi valley, but a careful examination of the amount of rain in the various western States, as given by the records kept at the military posts and other points, shows that as much rain has fallen in Kansas, for the last forty years, as in Missouri, Illinois, Indiana, Ohio, or Kentucky.

"We also have the testimony of the Indians, Missourians, and others, who have lived in this State for the last thirty years or more, that there has been no serious drought, in their memories, previous to 1860.

"The following note from the head chief of the Kaskaskia, Peoria, Piankeshaw, and Wea confederate tribes, is a fair sample of the testimony collected from the old Indian farmers:

PAOLA, Miami Co., Kan., Oct. 30, 1865.
 PROF. G. C. SWALLOW—Sir: I have cultivated my farm in this country for thirty-five years, and have raised good crops every year but one, A. D. 1860, and have had no serious injury from droughts previous to that year. The experience of other farmers, in my tribes, is the same as mine, in respect to crops and droughts.

[Signed]

BAPTISTE PEORIA.'

"Thus we see that the only exceptions to the general rule are those which occur in all countries."

WINDS.

The prevailing winds in summer are from south-west, south,

and south-east, and in winter they are exactly reversed. During the spring and fall these points are about equally represented; direct east and west winds are rare. Long continued south winds usually bring rain. The average force of the winds is greater than in the more eastern States, and they are more constant.

In conclusion, Dr. Sinks remarks: "For the eastern half of the State the measure of rain, excepting for the winter, is quite equal to that of Pennsylvania and New York, and amply large. West of 98th meridian there may reasonably be some doubt as to the sufficiency. The amount for the summer however is quite large, and, compared with that of the European plains, those of Germany and Russia, which sustain a large population, the difference is decidedly in favor of the plains of Kansas. The valleys of the Arkansas, Smoky Hill, Solomon, and Republican, are peculiarly rich in grasses, which would seem to be decisive of the general question of the sufficiency of rain. When this region shall have been reclaimed from the dominion of the wild buffalo and the wilder Indian, its productive capacity will be found to be far beyond that accorded by geographers. The resistless march of the hardy pioneer, and the commercial demands for an iron bond connecting the Atlantic and Pacific, will soon crowd them from their haunts, and not entirely imaginative will be the bright picture of quiet homes, cultivated fields, grazing herds, and a teeming population, spread over the fabled arid plains of Kansas.

SALUBRITY.

An unhealthy country can never be a desirable country to live in. One of the strongest inducements which Kansas holds out to emigrants is the fewness of its natural advantages for disease. It is an elevated, well-drained country, containing no swamps and sloughs, and muddy and feculent river bottoms. Its water courses are rapid. The climate is not severely rigorous in winter, and though sunny and hot in midsummer, it is gratefully tempered by regular breezes and cool nights. The winters are dry, with clear skies and pure bracing air. The well water is abundant, and free from deleterious admixtures. Even in the richest river bottoms there is a remarkable freedom from malarious influences, which are so ruinous to the health of the dwellers in the American bot-

toms, and other like locations on the Mississippi and some of its tributaries. For so new and so fertile a country it is truly remarkable that there is so little of fever and ague. Dr. C. A. Logan, in his report to Prof. Swallow, on the sanitary relations of the State of Kansas, well remarks: "A wet soil is productive of a rank vegetation, with its proneness to rapid decay; thus furnishing in profuseness one of the most essential elements of fever. In addition to this influence of a wet soil in favoring vegetable growth and decay, the meteorological condition is decidedly and insalubriously affected thereby. This is brought about by the excess of moisture with which the air is charged, whereby the secretions of the skin are impeded in direct proportion to the degree of saturation, and the internal organs are burdened, to a greater or less extent, with the office of removing effete materials, which, in health, it is the function of the skin to eliminate.

"On the other hand, a moist atmosphere, *if it be a cool one*, is equally productive of disease, though of a different nature, assuming more generally the shape of rheumatism and pulmonary disorders, the latter being quite as fatal in their effects as the diseases called into existence by heat and a high dew point.

"Kansas, by reason of its physical aspect, its soil and its high winds, is thoroughly drained. Its streams are swift. There is rarely any springy soil. In Ohio, Indiana, and Illinois, the streams generally flow through wide valleys, and have low banks, whereby the land is subject to inundation; a sub-soil, tenacious in the highest degree, being usual to those localities, the water does not drain off with facility, and much of it is left to be evaporated, and assist in the production of malarial fevers. In such regions the fevers are of a very pernicious character at times, the *sinking chills* and *congestive fevers* being regular and dreaded visitants. Kansas, to a great extent, is exempt from violent malarious fevers. Intermit-tents and remittents of a mild type are incident to the vernal and autumnal months, but they yield readily to appropriate treatment.

"To sum up, ague and bilious fever are the prevalent fevers of the spring and autumn months, but, originally of a mild character, they are becoming more so, and less frequent, year by year, as population flows into the State. Epidemic visitations are most violent where the general health rate is below par. Kansas is favored in respect to such diseases. Bad forms of diarrhea, dysentery, erysipelas, scarlet fever, small

pox, cholera, diphtheria, spotted fever, &c., rarely occur. *Rheumatism* is rare in eastern Kansas, but is common in the high regions near the rocky mountains."

Consumption—It has been known for years that certain localities are remarkably exempt from this dread disease, and prominent among them are the regions of the far north-west, and the elevated regions of the rocky mountains. The inference is, that a dry, cold atmosphere is preventive of the disease. Kansas is more favorably circumstanced for preventing the development of consumption than any other portion of the Great Valley.

STOCK RAISING.

The fertility of the soil, the mildness of the climate, the excellence of the native grasses, all combine to render Kansas equal to any portion of our country for the raising and fattening of stock. Like Nebraska, the State is well adapted to grazing in the regions considered too dry for ordinary farming, while in the eastern part of the State grain can easily be grown to finish off stock for market. On the Smoky Hill, the Arkansas, and the Republican, there are immense regions where stock can be kept the greater part of the year without any artificial shelter. Sheep do well in all parts of the State. Immense herds are now driven into Kansas from the State of Texas, and after being kept a year, become very much like the stock raised in more northern regions. The facilities that now exist for transporting cattle to market greatly enhance the profitability of this kind of business. For generations stock raising is like to be the most important business in the State. The myriads of buffalo which now darken the plains west of Fort Ellsworth, must give place to herds of domestic cattle, and the Indian hunter to the bold and hardy herder. Then, instead of a few buffalo robes, those vast regions will yield innumerable horses, mules, cattle, and sheep.

FENCING.

In the most eastern portion of the State fences are made, but as population increases and fills in further west, herding laws will be passed, so that great expense will be saved. In many parts stone walls are built around whole farms. The great abundance of rock, in nearly all parts of the State, renders it easy to do this. In some parts, in south-eastern Kansas, loose stone on the surface suffices to do this, at a cost of \$1.50 to \$3.00 per rod.

Osage Orange hedges are resorted to in all parts with great success. This kind of hedge can be grown in four years, so as to make a first class fence. The State encourages the growth of hedges by certain exemptions in respect to taxation :

An Act to encourage the growing of Hedges and building of Stone Fences.
Approved February 20, 1867.

* * * * *

SEC. 2. That any person planting an Osage or Hawthorn fence, or who shall build of stone a fence of four and one-half feet, around any field, within ten years from the passage of this Act, and successfully growing and cultivating the same, or keeping up said fence until it successfully resists stock, shall receive an annual bounty of two dollars for every forty rods as planted and cultivated, or built and kept up; the bounty to commence so soon as said fence will entirely resist cattle, and to continue for eight years thereafter. Said bounty to be paid from the treasury of the county in which said fence may be situated.

RAILROADS.

Since the conclusion of the war, an unparalleled zeal has been manifested for so young a State to develop her resources by projecting and voting aid to projected railroads. At the present time there are 600 miles of railroad in running order. The principal one is the Union Pacific railway, E. D. This, starting at Leavenworth and Kansas City, traverses the entire State from east to west through its central, and in some respects, best portions. It follows the Kansas and Smoky Hill rivers. The route is very favorable—being very straight and having very uniform and easy grades. It is supposed that this road will fork northward to Denver, Colorado, and southward towards Santa Fe, New Mexico, and be extended to Southern California. There are vast coal beds along this route. At Junction City there are extensive quarries of Magnesian Limestone, beautiful, easily worked and conveniently near the track. Gypsum abounds also. This road is completed for 405 miles to the western border.

The Central Branch of the U. P. R. R. commences at Atchison and is completed for 100 miles to Waterville, on the Little Blue River, in Marshall county. It is proposed to extend this railroad to connect with the U. P. R. at or west of Ft. Kearney, Nebraska.. This route passes through some of the finest farming and stock growing regions of the State. Magnesian Limestone of fine quality and Gypsum abound in inexhaustible quantities in the region where it crosses the Little and Big Blue rivers.

The Kansas City & Fort Scott Railroad commences at Kansas

City and passes through the eastern tier of counties southward through Fort Scott to the Indian territory, to intersect the railroad from Galveston, Texas. This road is graded to Olathe and the rails are now being laid to that place. This route is through a country of extraordinary beauty, fertility and great natural resources, more particularly coal. The climate is mild and well adapted to the growth of grapes, peaches and other fruits. Mr. Joy, of Detroit, who has obtained the vacant lands in the south-eastern part of the State is interested in pushing this road through so as to anticipate the time when

THE LEAVENWORTH, LAWRENCE AND FT. GIBSON RAILROAD shall reach the State line. The railroad that gets through first is to have the right of way through the Indian Territory free of cost. The L. L. and Ft. Gibson Railroad is in running order from Lawrence to Ottawa, 27 miles, and the grading has been completed for 23 miles further south. and will be, it is thought, in running order for 50 miles by January, 1869. Like its rival, it passes through a very beautiful and rich country. Its course is nearly due south, through the second tier of counties, to the valley of the Neosho. This road also is intended to connect with the Galveston Railroad.

THE ATCHISON, TOPEKA AND SANTA FE RAILROAD

commences at Atchison and passes in a south-western direction through the Capital to Emporia, Lyon county, and onward towards New Mexico. Coal abounds along this line and the soil is of first quality. Grading is now going on simultaneously from Atchison and Topeka, southwesterly. It is thought 50 miles will be completed within a year.

A branch road from Lawrence is projected to intersect this road at or near Burlingame or Emporia. This railroad will pass along the valley of the Wakarusa River.

The Missouri River Railroad is built, connecting Kansas City and Wyandotte with Leavenworth.

The Southern Branch of the Union Pacific from Ft. Riley down the valley of the Neosho, has a land grant and will probably be built soon.

The Atchison and Pikes Peak Railroad, is now styled the Central Branch of the U. P. R. R., described above.

There is a strong probability that a railroad will be built from Lawrence to Pleasant Hill, Missouri, nearly parallel with the U. P. R. R., E. D.

A railroad from Leavenworth to Atchison, or a continuation

of the M. River railroad is contemplated. This would make a direct route from the Nebraska U. P. railroad from Ft. Kearney to St. Louis, without crossing the Missouri river. This railroad will very probably be extended along the valley of the Missouri river up to Omaha.

The St. Joseph and Denver railroad commences at Elmwood, opposite St. Joseph, Mo., and passes in a due westerly course towards Colorado, via Troy, Seneca and Marysville. The road has been graded from Elmwood to Troy.

A railroad route has been proposed from the C. B. U. P., commencing at the Big Blue and passing toward Junction City.

All of the above named roads will pass through very fertile regions and the ease of construction render it probable that all of them will soon be built. The zeal manifested in Kansas in preparing the way for a net work of railways, speaks well for the enterprise and wisdom of the people who are so ready to vote aid in the regions through which they are to pass. Certainly no State so new has done so much. The impulse which the opening of railroads will give has already commenced in advance of their construction. Population is flowing in with unexampled rapidity, and the price of land is rapidly advancing.

LAND DISTRICTS.

There are three United States Land Offices in the State. The Topeka land district embraces the north-eastern portion of the State, or all that portion east of the sixth principal meridian, and north of township 23 south. This district embraces the healthiest and most thickly-settled portion of the State. Nearly all vacant land is disposed of, except land within the railroad limit of twenty miles on each side of the roads that had United States grants. The greater quantity of this land is along the C. B. U. P. railroad, and can be obtained only by actual settlement under pre-emption and homestead claims.

The Junction City Land Office embraces all the State directly west of the Topeka district. There are immense quantities of minimum-priced lands open to entry under pre-emption and homestead Acts, and but little open to private entry.

The Humboldt Land District embraces all of the State from the Missouri State line to the western boundary below the 22 township line—or all not included in the other two dis-

tricts. The lands in the eastern portion of the district are largely taken, except on the Osage Indian Reservation, which is adjacent to the Indian Territory.

From what has been said it will be manifest that there are but few opportunities to obtain government land except by actual settlers. For these there are millions of acres open, and as it is a matter of great importance to the emigrant to know how land can be obtained, and under what conditions, a full official statement will be given of the United States land office regulations:

U. S. GENERAL LAND OFFICE REGULATIONS.

There are two classes of public lands, the one class at \$1.25 per acre, which is designated as *minimum*, and the other at \$2.50 per acre, or *double minimum*.

Title may be acquired by purchase at public sale, or by ordinary "private entry," and in virtue of the Pre-emption and Homestead laws.

1. At public sale where lands are "offered" at public auction to the highest bidder, either pursuant to Proclamation by the President, or public notice given in accordance with directions from the General Land Office.

BY PRIVATE "ENTRY" OR LOCATION.

2. The lands of this class liable to disposal are those which have been offered at public sale, and thereafter remain unsold, and which have not been subsequently reserved, or otherwise withdrawn from market. In this class of offered and unreserved public lands the following steps may be taken to acquire title:

CASH PURCHASES.

3. The applicant must present a written application to the Register for the District in which the land desired is situated, describing the tract he wishes to purchase, giving its area. Thereupon the Register, if the tract is vacant, will so certify to the Receiver, stating the price, and the applicant must then pay the amount of the purchase money.

The Receiver will then issue to the purchaser a duplicate receipt, and at the close of the month the Register and Receiver will make returns of the sale to the General Land Office, from whence, when the proceedings are found regular, a patent or complete title will be issued; and on surrender of the duplicate receipt such patent will be delivered, at the option of the patentee, either by the Commissioner at Washington, or by the Register at the District Land Office.

LOCATIONS WITH WARRANTS.

4. Application must be made as in cash cases, but must be accompanied by a warrant duly assigned as the consideration for the land; yet where the tract is \$2.50 per acre, the party, in addition to the surrendered warrant, must pay in *cash* \$1.25 per acre, as the warrant is in satisfaction of only so many acres as are mentioned on its face. A duplicate certificate of location will then be furnished the party, to be held until the patent is delivered, as in cases of cash sales.

The following Fees are chargeable by the land officers, and the several amounts must be *paid at the time of location* :

For a 40-acre warrant, 50 cents each to the Register and Receiver-Total	\$1.00
For a 60-acre warrant 75 cents " " " " "	\$1.50
For an 80-acre warrant, \$1 " " " " "	\$2.00
For a 120-acre warrant, \$1.50 " " " " "	\$3.00
For a 160-acre warrant, \$2.00 " " " " "	\$4.00

AGRICULTURAL COLLEGE SCRIP.

5. This Scrip is applicable to lands *not mineral*, which may be subject to private entry at \$1.25 per acre, yet is restricted to a technical "*quarter section*;" that is, land embraced by the quarter section lines indicated on the official plats of survey, or it may be located on a *part* of a "quarter section," where such part is taken as in full for a quarter, but it cannot be applied to different subdivisions to make an area equivalent to a quarter section. The manner of proceeding to acquire title with this class of paper is the same as in cash and warrant cases, the fees to be paid being the same as on warrants.

PRE-EMPTIONS TO THE EXTENT OF ONE QUARTER SECTION, OR ONE HUNDRED AND SIXTY ACRES.

6. These may be made upon "offered" and "unoffered" land, and in certain States and Territories west of the Mississippi, including that part of Minnesota east of the river, may have legal inception by actual settlement upon *unsurveyed* land, although in such cases no definite proceedings can be had as to the completion of title until after the surveys are officially returned to the District Land Office.

7. The Act of 3rd March, 1853, extends the pre-emption for one quarter, or 160 acres, at \$2.50 per acre, to every "*alternate*" United States or *reserved* section along the line of railroads.

8. The Act of 27th March, 1854, vol. 10, page 269, chap. XXV, protects the right of settlers on sections along the line of railroads, where settlement existed prior to withdrawal, and in such cases allows the tract to be taken by pre-emptors at \$1.25 per acre.

9. Where the tract is "*offered*," the party must file with the District Land Office his Declaratory Statement as to the fact of his settlement within thirty days from the date of said settlement, and, within one year from that date, must appear before the Register and Receiver, and make proof of his actual residence on and cultivation of the tract, and secure the same by paying *cash*, or by filing warrant duly assigned to the Pre-emptor.

10. Where the tract has been surveyed and *not* offered at public sale, the claimant must file within three months from the date of settlement, and make proof and payment before the day designated in President's Proclamation for offering the lands at public sale.

11. Should the settler in either of the aforesaid cases die before establishing his claim within the period limited by law, the title may be perfected by the executor, administrator, or one of the heirs, by making the requisite proof of settlement and paying for the land; the entry to be made in the name of "the heirs" of the deceased settler, and the patent will be issued accordingly.

12. In those States and Territories in which settlements are authorized by law on *unsurveyed* land, the claimant must file notice of settlement within three months after the receipt of the township plat of survey at the District Land Office, and make proof and payment as required under 10th head in the foregoing.

LAWS EXTENDING THE HOMESTEAD PRINCIPLE.

13. The original Homestead Act of May 20, 1862, gives to every citizen, and to those who had declared their intentions to become such, the right to a homestead on *surveyed* lands. This is conceded to the extent of one quarter section, or 160 acres, at \$1.25 per acre, or 80 acres of double minimum in any *organized district* embracing *surveyed* public lands, except in the five Southern Land States hereinafter mentioned, where the right is restricted to 80 acres minimum, and 40 acres double minimum.

14. To obtain homesteads the party must, in connection with his application, make an affidavit before the Register or Receiver that he is over the age of twenty-one, or the head of a family; that he is a citizen of the United States, or has declared his intention to become such, and that the entry is made for his exclusive use and benefit, and for actual settlement and cultivation.

15. Where the applicant is prevented by reason of bodily infirmity, distance, or other good cause, from personal attendance at the District Land Office, the affidavit may be made before the clerk of the court for the county within which the party is an actual resident.

For Homestead entries on *surveyed* lands in KANSAS, NEBRASKA, and DAKOTA, fees are to be paid according to the following table:

Acres.	Price per acre.	COMMISSIONS.		FEES.	
		Payable when entry is made.	Payable when Patent issues.	Payable when entry is made.	Fees and cost.
160	\$1.25	\$4 00	\$4.00	\$10.00	\$18.00
80	1.25	2 00	2.00	5.00	9.00
40	1.25	1.00	1.00	5.00	7.00
80	2.50	4.00	4.00	10.00	18.00
40	2.50	2.00	2.00	5.00	9.00

18. The Receiver will issue his receipt showing such payment, and will furnish a duplicate to the claimant.

19. An inceptive right is vested in the settler by such proceedings, and upon faithful observance of the law, in regard to settlement and cultivation or the continuous term of five years, and at the expiration of that time, or within two years thereafter, upon proper proof to the satisfaction of the Land Officers, and payment to the Receiver, the Register will issue his certificate, and make proper returns to this office as the basis of a patent or complete title for the homestead.

20. Where a Homestead settler dies before the consummation of his claim, the heirs may continue the settlement and cultivation, and obtain title upon requisite proof at the proper time.

Where both parents die leaving infant heirs, the Homestead is required to be sold for cash for the benefit of such heirs, and the purchaser will receive title from the United States.

21. The sale of a Homestead claim by the settler to another party before completion of title is not recognized by this office, and not only vests no title or equities in the purchaser, but would be *prima facie* evidence of abandonment, and give cause for cancellation of the claim.

22. As the law allows but one Homestead privilege, a settler relinquishing or abandoning his claim cannot thereafter make a second entry. Where an individual has made settlement on a surveyed tract, and filed his pre-emption declaration therefor, he may change his filing into Homestead, yet such change is inadmissible where an adverse right has intervened, but in such cases the settler has the privilege of perfecting his title under the pre-emption laws.

23. If the Homestead settler does not wish to remain five years on his tract, the law permits him to pay for it with cash or warrants, upon making

proof of settlement and cultivation from the date of entry to the time of payment.

This proof of actual settlement and cultivation must be the affidavit of the party made before the local officers, corroborated by the testimony of two credible witnesses.

24. There is another class of Homesteads, designated as "Adjoining farm Homesteads." In these cases the law allows an applicant, *owning* and *residing* on an original farm, to enter other land lying contiguous thereto, which shall not, with such farm, exceed in the aggregate 160 acres. Thus, for example, a party owning or occupying 80 *acres*, may enter 80 additional of \$1.25, or 40 acres of \$2.50 land. Or suppose the applicant to own 40 *acres*, then he may enter 120 acres at \$1.25, or 40 at \$1.25, and 40 at \$2.50, if both classes of lands should be found contiguous to his original farm. In entries of "adjoining farms" the settler must describe, in his affidavit, the tract he owns, and is settled upon as his original farm. Actual residence on the tract entered as an adjoining tract is not required, but *bona fide* improvement and cultivation of it must be shown for the period required by statute.

25. Lands obtained under the Homestead laws are exempted from liability for debts contracted prior to the issuing of patent therefor.

26. It is the duty of the Registers and Receivers to be in attendance at their offices, and give proper facilities and information to persons applying for lands.

JOS. S. WILSON,
Commissioner of the General Land Office.

INDIANS.

The tribes in the eastern half of the State are friendly to the whites, and in a measure civilized. Many of the people of these have left for regions south and south-west. Except the more civilized, they seem disposed to sell out and leave. There are a few hundred left on the Diminished Kickapoo Reservation in Brown county. So there are some in regions along the eastern border, but they are so few in number as to be no ground of fear to the whites. The wild Cheyennes and Arrapahoe Indians roam over the western part of the State, and are there very troublesome at times. Their destiny is to disappear before the pale faces. The policy of removing them to a region south of the State, so as to render the Pacific route free from their presence, is likely to be carried out. Many of the wilder tribes will be reluctant to leave their old buffalo hunting grounds, but the security of commerce and civilized men will make it necessary.

RAILROAD, STAGE AND STEAMBOAT ROUTES.

Persons wishing to reach Kansas from the east can have choice of many railroad routes. From the region of Chicago the most eligible route is by the Chicago, Burlington, and Quincy, and the Hannibal and St Joseph roads, to northern

Kansas. Or by the various routes from Chicago and the country south to St. Louis, and thence by the Missouri Pacific railroad to Kansas City. This is an admirable route for those who wish to reach central and southern Kansas. The connections are close and the time good. To one wishing to go to Fort Scott, the Pleasant Hill daily stage route is the quickest. There is also a good daily stage route Sedalia, Mo., to Fort Scott, also from Kansas City. From north-western Illinois and from Iowa the best route is by the North-Western to Council Bluffs, and thence by Missouri Valley railroad to St. Joseph, thence to Atchison, or Leavenworth, or Kansas City, all the way by rail. In the warm months many go by steamboats from St. Louis to the eastern termini of the railroads in Kansas. Persons wishing to go to the northern tier of counties should go to Atchison. Daily mail routes diverge from Netawaka, Centralia, Frankfort, and Waterville, on the C. B. U. P. railroad.

From the Union Pacific railroad, eastern division, there are daily stage or railroad routes from Lawrence, Topeka, Manhattan, and Junction City, north and south, and also frequent routes from the smaller intermediate stations.

From Fort Scott there are daily stages to Pleasant Hill, Mo., Sedalia, Mo., to Kansas City, and tri-weekly to Garnett and Humboldt and Baxter's Springs. From Baxter's Springs there is a tri-weekly stage to Humboldt and to Carthage, Mo., and south towards Fort Gibson. To Emporia, the most direct route would be from Topeka by daily stage.

Railroad fares are from 5 to 7½ cents per mile. Stage fares are from 10 to 12 cents per mile. Steamboat fares about the same as railroads, with meals and berths included. The Steamboats on the Missouri river are generally of the first class. Livery charges are usually, for buggy, from \$3 to \$5 per day.

TABLE OF DISTANCES

On Union Pacific Railway, E. D.		Miles.
Leavenworth to Lawrence,	-----	33
Kansas City to State Line,	-----	1
State Line to Armstrong,	-----	1
“ “ “ Munice,	-----	7
“ “ “ Secundine,	-----	9
“ “ “ Edwardsville,	-----	12
“ “ “ Tiblow,	-----	16
“ “ “ Lenape,	-----	22
“ “ “ Stranger,	-----	27
“ “ “ Fall Leaf,	-----	31
“ “ “ Leavenworth and Lawrence Junction,	-----	36
“ “ “ LAWRENCE,	-----	38
“ “ “ Buck Creek,	-----	45
“ “ “ Williamstown,	-----	47
“ “ “ Perryville,	-----	50
“ “ “ Medina,	-----	52
“ “ “ Grant's Station	-----	60
“ “ “ TOPEKA,	-----	66
“ “ “ Silver Lake,	-----	77
“ “ “ Cross Creek,	-----	82
“ “ “ St. Mary's	-----	98
“ “ “ Wamego,	-----	103
“ “ “ St. George,	-----	110
“ “ “ MANHATTAN,	-----	117
“ “ “ Ogden,	-----	129
“ “ “ Ft. Riley,	-----	135
“ “ “ Junction City,	-----	138
“ “ “ Chapman's Creek,	-----	150
“ “ “ Detroit,	-----	156
“ “ “ Abilene,	-----	162
“ “ “ Sand Spring,	-----	166
“ “ “ Salina,	-----	185
“ “ “ Ft. Harker,	-----	218
“ “ “ Ellsworth,	-----	222
“ “ “ Walker,	-----	274
“ “ “ Hays City,	-----	288
“ “ “ Antelope,	-----	340
“ “ “ Monument,	-----	386
“ “ “ Sheridan,	-----	495

EDUCATION.

The following summary of the educational interests of the State was furnished by John D. Parker, Ph. D., Professor in Lincoln College, Topeka, Kansas:

The people of Kansas, true to their noble ancestry, early began to lay the foundations of government in the intelligence of the people. The baptism of blood which they have received has taught them anew that liberty must be cemented in virtue and knowledge. The 16th and 36th sections of land were set apart by Congress in the organic act constituting the State to be a perpetual and inalienable fund for the support of common schools.

The essential features of the present admirable school system of the State are as follows:

Each civil county is divided into as many districts as there are neighborhoods requiring separate schools. Each school district is deemed duly organized when the officers, consisting of a Director, Clerk and Treasurer, shall be elected, who shall constitute the district Board. It is the duty of the board to select such sites, and build, hire or purchase such school houses as the qualified voters of the district shall agree upon. To hire teachers; to determine the length of time more than three months each year that a school shall be kept, unless determined by the legal voters; and to have a general supervision over the schools and school property. Two or more districts can unite for the purpose of establishing a graded school; and there is a special law regulating schools in towns and cities.

2. Each county elects, biennially, a Superintendent of Common Schools. It shall be his duty to divide the county into a convenient number of districts; to visit schools, examine teachers, grant and revoke certificates; apportion the school funds; and have a general supervision of the school interests of the county.

3. A State Superintendent of Public Instruction is elected biennially by the people. It shall be his duty to visit each county in the State at least once in each year; to file and preserve official reports of public and private schools; to hold in connection with the County Superintendent a Teacher's Institute in each year, in each Senatorial District of the State; to apportion to each county the amount of school fund belonging to it; to submit to the Legislature an annual report; and to have a general supervision over the common schools of the State.

uated on the high land about two miles west of the city, commanding a fine view. This institution came into possession of 90,000 acres of the best land of the State, by the act of Congress establishing agricultural colleges in the several States. The College is organized with a President and five Professors. It possesses the Mudge Cabinet, (a gift by Prof. B. F. Mudge), and a fine apparatus and library.

STATE NORMAL SCHOOL.

The State Normal School is located at Emporia, in Lyon county, in the Neosho Valley. The endowment of this institution consists of 46,000 acres of land. The institution has been organized with three Professors.

WASHBURNE COLLEGE.

Washburne College, located at Topeka, the Capital of the State, is under the supervision of the Congregationalists. It has been organized with a faculty of three Professors and three instructors. This College, after the New England style, is to receive an immediate endowment under the College Society. The building, grounds, cabinet, library and present endowment, are estimated at \$30,000. Dea. Ichabod Washburne, of Worcester, Mass., has made a donation of \$25,000. As there was several other institutions styled Lincoln, the name has been changed as above.

PARKER UNIVERSITY.

Parker University, located at Baldwin City, is under the supervision of the Methodist Episcopal Church. It has been organized with a President and six Professors. This institution owns 700 lots in Baldwin City, 1,800 acres of land in the State, and buildings, grounds, apparatus, library and cabinet, valued at \$30,000.

HIGHLAND UNIVERSITY.

Highland University, located at Highland, Doniphan county, is under the auspices of the Old School Presbyterians. This institution at present has no endowment and no college course arranged.

LANE UNIVERSITY.

Lane University, located at Lecompton, Douglas county, is under the supervision of the United Brethren. It holds property to the amount of \$40,000,—\$30,000 being in buildings, and \$10,000 in lots and endowment fund. The preparatory school is organized under the common school law.

OTTAWA UNIVERSITY.

Ottawa University, located at Ottawa, Franklin county, is under the auspices of the Baptists. Four or five years ago the Ottawa Indians made over 20,000 acres of land for the endowment of a school to be open for the tribe for all time. A fine building, still unfinished, has been erected. The institution is in debt about \$30,000. This institution has opened two departments, one for white, the other for Indian children.

WETMORE INSTITUTE.

Wetmore Institute, located at Irving, Marshall county, is under the auspices of the New School Presbyterians. The institute, including the grounds, furniture, library and apparatus, has cost about \$8,000.

WESTERN CHRISTIAN UNIVERSITY.

The Western Christian University is located at Ottumwa, Coffey county, is under the care of the Christian Brotherhood. The institution has property estimated at \$15,000, but no endowment fund.

EPISCOPAL FEMALE SEMINARY.

The Episcopal Female Seminary is located at Topeka, the capital of the State.

In addition to these institutions, the M. E. Church is establishing an Academy at Hartford, in the southern part of the State. The Old School Presbyterians are laying the foundation for an institution of high literary character, at Geneva, Allen county. The Catholics have established three seminaries of learning at Atchison, Leavenworth and Topeka.

THE ASYLUM FOR THE DEAF AND DUMB.

Is located at Olathe, Johnson county. The present number of pupils is twenty-two.

Besides these, the Institution for the Blind is located at Wyandotte, Wyandotte county; the Insane Asylum at Ossawatimie, Miami county, and the State Penitentiary at Leavenworth, Leavenworth county.

DESCRIPTION OF COUNTIES IN THE STATE.*Doniphan County.*

This county lies in the north-east corner of the State. It contains 380 square miles. It has a river boundary of over 60 miles. The main creeks flow east and north. The bluffs on

the Missouri river in some places are near the river and at some places they recede and the bottoms are wide. Most of the bottoms are above high water mark. The bluffs are from 50 to 200 feet in height—sometimes abrupt, but often so rolling as to be suitable for cultivation. Much the largest portion of the county is high, rolling prairie, and well adapted for farming purposes. The scenery is very fine and the country is very beautiful. The soil of this county is excellent. The Bluff formation underlies it. The color is of the Mulatto tinge. The bottoms are exceedingly rich on the Missouri river. Below White Cloud there are heavy beds of limestone, shales and sandstone. The former makes good building and fencing materials. Some coal has been found. All the staples of this latitude do finely here. Fruit also has done well here, especially on the high and northern exposures.

Major Hawn remarks: "My observation in this and other States in the west, leads me to believe that southern exposures for fruit should be avoided as well as deep valleys." The roots of trees grown on our deep, porous, subsoils, penetrate the earth to a great depth. The roots of indigenous trees are often found at the depth of twenty feet below the surface. It will be readily seen that roots lying below the influence of atmospheric changes are constantly urging their sap to the surface, and upon a favorable condition above, in the winter, send it to the branches and buds. The apple tree particularly responds to such changes, for it is an exotic of a colder and more steadfast climate. Such favorable conditions are constantly occurring during the warm days of our genial winters, succeeded by nights of cold and hard frosts, freezing and vitiating the sap sent up the day previous, to the injury of the tree. These deleterious effects may be modified, if not counteracted, by selecting northern slopes or hill summits for the orchards. The temperature between day and night on northern slopes is more in equilibrium, in consequence of being less under the influence of the solar rays and having a freer circulation of air on the hill tops. The healthiest and most prolific trees are found in such locations.

Troy is the county seat. This is a fine village in a central position, on a high, rolling prairie. The St. Joseph and Denver Railroad has been graded to this place from Elwood. This latter place is opposite St. Joseph, Mo. The site is low and the power of the Mississippi river in high water was such as to carry away most of the old site. Should the railroad be

extended, the wants of commerce will probably lead to some precautionary measure to prevent a recurrence of such a catastrophe. Wathena is a lively town, a few miles west of Elwood. The German element is strong here. In the south-eastern part of the county is Doniphan, an important exporting place on the river. In the north-eastern part of the county White Cloud and Iowa Point are important river towns. A little south of these and six miles from the river is a very neat and flourishing village called *Highland*.

Brown County

Lies west of Doniphan, and except it has no Missouri river bottom, it is very much like that county. It is already settled up quite considerably. Hiawatha is the county seat. The noted Kickapoo Reservation lies mainly in the southern part of this county. The Indians are few and live on the diminished reserve. This noble body of high, rolling land is watered by the Santrelle or Grasshopper and the Little Grasshopper. It has passed into the hands of the C. B. U. P. R. R., which road passes through the southern portion of it for about 15 miles. Several thriving towns have already sprung up and settlement by an enterprising class of people, is advancing at a rapid rate. The railroad company which has the head of the land department at Atchison, offers about 150,000 acres of this reservation for sale. The land is from 20 to 40 miles from that city,—is of the first quality and has considerable timber on the Grasshopper and its tributaries. These lands are exempt from taxation for six years. They are sold on time to suit purchasers, from three to ten years credit. The interest being respectively 6, 7, 8, or 10 per cent. on different payments. The prices ranging from \$3 to \$10, except a few choice tracts, immediately adjoining railroad stations. Facilities are rendered to purchasers of free excursion tickets and moderate charges for transportation of household furniture and building material. For information about this company's land, address the Land Commissioner, (W. F. Downs,) *Atchison, Kansas*.

Atchison County.

This county lies directly south of Brown and Doniphan, on the Missouri River, 16 miles wide by 25 long. It is very much like these counties in general characteristics. Atchison, one of the oldest towns in the state, is the county seat

and the principal commercial place of the county. It is situated in the great western bend of the Missouri River. It is a growing city and contains many fine residences, stores and churches. Population 10,000. It bids fair to become an important railroad center. The C. B. U. P. R. R., the Atchison, Topeka and Santa Fe R. R., and the Atchison and Nebraska City R. R., and the Atchison Division of the Missouri Pacific R. R. to Leavenworth, will all soon be completed, it is thought.

Another has been projected to Lawrence. A large and constantly increasing business is here carried on. The location is very fine. The land rises immediately high above the river, and the bluffs in the rear of the city afford a high and noble view of the country in the valley of the Missouri. There is a steam ferry boat here to Winthrop, on the M. R. V. R. R., in Missouri.

Persons wishing to visit the northern tier of counties should come to this city, and by railroad they can advance westward 100 miles to the Big Blue, in Marshall county.

Brick is largely manufactured in this vicinity.

The prices of land in the three counties in the north-east part of the State, a few miles back from town, ranges for improved property from \$10 to \$25 per acre. For wild land from \$3 to \$10 per acre. There is considerable timber, good water, and in many parts stone.

In 1860 (the year of drouth,) there was more than half a crop of wheat and corn raised in this county.

The other towns of note are Sumner, Pardee, Port William, Monrovia, Mount Pleasant, Muscotah, Kennekuk and Ne-tawaka. Population over 20,000.

Nemaha County.

This county is 24 miles east and west, by 30 north and south. It contains nearly 500,000 acres of land, some 10,000 acres of which are still open for occupation by actual settlers under Homestead and Pre-emption acts. Other wild land ranges from \$4 to \$10 per acre, and improved land runs from \$10 to \$40, according to improvements and proximity to towns and timber. This county is well watered. The principal streams are the Nemaha, Deer, Harris, Tennessee Spring, the East Vermillion, Illinois Wolfleys, Turkey and Wild Cat. These afford stock water in abundance, and timber is found on their bottoms. Limestone abounds, suitable

for fencing, building and for burning into lime. Coal is found in several localities, and is used for culinary and smithing operations. Brick can be and are made in the various parts of the county. The soil is uniformly of good quality.

The Central Branch U. P. R. R. passes through the middle of the southern half of the county. Wetmore and Centralia are the most important railroad towns. Seneca is the county seat. This is a fine and enterprising village, some eight miles north of the railroad. Several churches exist here, and a good interest is manifested in common schools. It lies near an important tributary of the Great Nemaha, and timber is found within a convenient distance. Albany is a good town in the north-eastern part of the county. There are quite a number of other villages. This county is certainly to be commended for the interest manifested in educational and other important matters. It well deserves the attention of those seeking new homes.

Marshall County.

This county is 30 miles square, and in its general natural characteristics, is much like Nemaha county. It would be difficult to find anywhere, land lying more favorable for extensive farming, and affording better advantages for stock raising. The railroad at present terminates at Waterville, on the western side of the county, after passing through its southern half. The principal streams are the Big Blue, the little Blue, the Black Vermillion, the Red Vermillion, Horse Shoe Creek, Clear Creek and Salt Fork. Rock is quite abundant on the Blues and the smaller streams, but does not injure the soil by cropping out on the rolling prairies and bottoms. It is generally found on the river banks and ravines. The magnesian limestone of the permian formation abounds on the Blues, and is of great beauty and is most easily worked out, and cut into any desirable form. Gypsum in thick beds is found near Marysville. This makes a plaster equal to Nova Scotia plaster. It will also be of great value as a fertilizer when the soil has deteriorated by constant use or rather abuse. Marysville is the county seat, distant 10 miles from the railroad. One of the best flouring mills in the State is at this place. It is situated on the Big Blue. There are stage routes to this place from Frankfort on railroad, daily. From Beatrice, Nebraska, a tri-weekly. There is a route to Pawnee City, Nebraska, also to Washing-

on, the county seat of Washington county. The most important railroad towns are Frankfort, Irving and Waterville. At Irving, which is north of the Little Blue, there is an academy, styled the Wetmore Institute. It is a pleasant location. There is a stone building and a campus containing 20 acres. The scenery here is very fine. The limestone crops out very distinctly on the upper parts of the conical bluffs. Several quarries are worked near this place. On the Horseshoe Creek there is a very flourishing German settlement. In the northeast corner of the county there is quite an Irish settlement, around St. Bridget. A church here is to be erected 40 by 80 feet.

The following are examples of the extreme productiveness of the soil in this region: Anthony Sharp threshed 85 bushels of oats off of one acre of upland, in 1866; W. P. Madden raised 50 bushels of wheat to the acre the same year. Michael Murray raised 80 bushels of corn per acre on bottom land. These, of course, are above the general average. Wild grapes are so abundant in this region that quite a considerable quantity of wine is made yearly. A beautiful variety of gray slate is found in this vicinity; also stone coal. The Otoe Reservation extends two miles into this county from Nebraska. At Oketo, on the Big Blue, just south of the Reserve, is a new mill. The prairie in the northern part of the county, for magnificence of appearance, cannot be excelled. The gradual descent from one swell to another will be for miles. And the clumps of trees and groves along the Blue and its tributaries afford as beautiful and picturesque a scene as can be found in any prairie country. The Indians on the Otoe Reserve number about 500. They live at a village (the agency) some 5 miles north of the Kansas line. They are friendly to the whites.

Mr. Guittard (a ranche man), informs me that a field of corn which I saw in 1867, yielded 80 bushels per acre. His wheat crop that year was heavy.

This year, 1868, the drouth, coupled with an extraordinary hot term, has cut off the corn worse than in 1860, when they had half a crop. For the last twenty years good crops have been the rule—failures the exception. A spring throws up water sufficient for 1,000 head of cattle on the borders of his prairie farm. It never diminishes in volume in dry times and does not freeze in winter.

As illustrating what can be done in Kansas by industry,

perseverence and aptness for pioneer life, listen to the story of a German emigrant on *Snipe Creek*: In the spring of 1859, Charles Scholtz, his wife and seven children, the eldest not over 15 years of age, journeyed with an ox team, an old wagon, some household stuff and a few dollars, their whole property, to the banks of Snipe Creek, a tributary to the Black Vermillion. Taking a squatter's claim, they attempted to raise a little corn and wheat and to prepare a cabin. The crop of the first year was of course quite small.

During this year a remittance from the old country of three hundred dollars enabled them to procure a land warrant for \$110 and the quarter-section on which they had settled was their own. Their next move was to procure a cow, a pair of fowls and another yoke of oxen, as one of the first yoke was lame. Next some farming utensils, and some indispensable things to render their cabin comfortable. Then there must be some winter clothing and shoes, and the money was all gone.

As they had raised but little, and what wheat they had was needed for seed, the older children found employment with people in the country around. None however were within several miles. By an economy and industry such as Germans possess, they survived the first winter. Eleven bushels of wheat was sown in the spring of 1860. Some corn also. The cow furnished milk, but eggs were saved to increase their poultry. Then came the unparalleled drouth. The wheat was harvested with knives, and amounted only to the seed—11 bushels. The corn was scant, and the prospect in the autumn of the second year looked more dreary than in the first. The famine awakened pity abroad, and this became what our German called *donation year*. But even free gifts were obtained with difficulty by him. Three times did he make a trip with his ox team to Atchison, a distance of over 70 miles, before he could obtain anything for his family. Either others had stepped in before him and all was gone, or his being a German, as he thinks, in a land of strangers, was the reason. At length on the third trip he returned home with some corn and a few additional bushels of wheat for seed.

During this year they had no meat, but lived principally on corn bread, water and molasses. The spring of 1861 opened auspiciously. All their wheat had been saved for seed, and it brought them a noble harvest. They had corn in abundance for home use, and some few vegetables. Not a moment

as wasted, but ground was broken, and trusting in God, they labored on with a cheerful heart. Their wants were few. They all *persisted in working*, and prosperity attended their efforts.

When the writer visited this part of Marshall county in the summer of 1868, he turned aside a little from the direct route from Guittards to Frankfort, to see the noble stone mansion of the farmer on Snipe Creek. He is still over a mile from the nearest inhabitant. He was found driving a gangplow and two of his sons were also plowing. He had 60 acres inclosed. His cabin was surrounded by a small city of wheat stacks. He had 600 bushels of old corn in his crib, for the bitter experience of the first two years had taught him not to sell off the last bushel before harvest. He had 100 native grape vines in his garden loaded with grapes. He was erecting a stone mansion nearly 40 feet square, the rock being well cut and finished, for he had learned the trade of stone mason in Germany, and had taught his children the art. His sons in the winter season had got out the rock from a quarry a mile off, and the walls were above the first story. The cellar was ten feet deep, rock on the bottom, rock on the sides, and in one half, for it was divided into many compartments by thick stone walls,—there was a stone arched ceiling for his dairy operations. In no part of our country east or west did I ever see a more thoroughly built cellar. Even the cellar stairs were of rock. In the blazing heat of this past summer, the rock cellar was cool and airy, proof alike against heat and cold.

Hired help there had been none from the first. The farmer and his wife, sons and daughters, had done all. He is now the owner of over a mile square of rich land, and it is nearly all paid for. As I strolled away from his house a mile, a noble herd of 70 head of cattle, led by a large and well built sire, approached me. They showed by their tameness that they had a kind master. As I looked at that herd, so fat and glossy, and then from an eminence in the prairie turned to the large and elegant mansion approaching completion, and surveyed the broad acres already plowed for the next year's crop of wheat, I could but exclaim what a noble result from so small a beginning. How much better to be an owner of the soil than to be a hanger-on of an over-crowded city, or a miserable dependent on party spoils.

Is any one ready to say, would that I had gone to Kansas

one year after the drouth, when land was cheap? There are to-day thousands of homesteads ready for occupants cheaper than that obtained by Herr Scholtz, and some within sight of his home.

Washington County.

This county is adjacent to Marshall county on the west, and is of the same size or 30 miles square, or containing over 500,000 acres.

The Little Blue and its affluents water the northern and eastern parts, and the tributaries of the Republican the south-western. That noted river flows around the south-western corner of the county. This is a fine country, being well supplied with water, possessing good soil and having considerable timber, and vast quantities of rock along its larger streams, which also afford good mill privileges.

As this county is beyond the terminus of the C. B. U. P. R. R., the land can be had by homestead claims in tracts of 160 acres, or double the amount that can be had along side of the railroad. Pre-emptors can obtain 160 acres at \$1.25 per acre, and by availing himself of both rights, 240 acres can, in five years, be obtained by an actual settler for \$220.

Along the Little Blue many Homestead claims have been made. As non-residents cannot buy land here, it will continue to be a desirable region to which to come. Should the present proposed policy of keeping the Indians off their favorite hunting grounds on the Republican be carried out, this region will be crowded with settlers, who wish to attend to stock raising. Gypsum and magnesian limestone and ferruginous sand-stone abound. From statements made by residents, I could not see that crops were inferior in favorable seasons to those raised in the more eastern counties. This year the drouth was more severe than in the Missouri river counties, but in 1860 the grass was very luxuriant along the Republican. There is quite a large quantity of land selected for the agricultural college in this and Marshall counties. These lands are sold on long time at prices from \$3 to \$7 per acre.

Washington is the county seat, situated on Mill Creek, or south branch of the Little Blue. This town is pleasantly located, and there are saw and flour mills near. Well water is good and easily obtained. The C. B. U. P. railroad will probably pass by Washington to Fort Kearney. The counties west of this are represented to me to be very fertile and

exceedingly well watered, but at present are so over-run by Indians in the summer, that white people hesitate to go further for present settlement. When the railroad is completed population will follow.

Clay and Riley Counties.

These lie directly south of Washington and the western part of Marshall counties. The Republican flows diagonally through Clay, and the Big Blue bounds the eastern side of Riley, while the Republican and Kansas wash its southern boundary. Along these rivers the soil is very rich, and these are desirable counties. The bottoms on the Republican vary in width, but are frequently four miles wide. The river is 200 yards wide. Some settlements have already been made in Clay and more in Riley county.

Manhattan, on the Union Pacific railway, is the county seat of Riley. It is pleasantly located near the junction of the Big Blue and the Kansas rivers. The Wild Cat runs a little west. This is an enterprising town, having many fine houses. The Congregational, Episcopal, Presbyterian, and Methodist denominations here have churches. The Agricultural College is established at Blue Mont, about one mile up the Blue river, on a fine eminence. The scenery here is most beautiful, and it continues to be so on the Blue through the State to Nebraska. The educational advantages here are of a high order. Everything promises a large and important place. There is a fine water power at Manhattan. A dam has been constructed three miles above the town, and by conducting the water down, a fall of 24 feet may be obtained.

Ogden is a thriving German town. Fort Riley is a military post, and is a refitting point. There is quite a tract held by the government for the Fort. Rock is very abundant. Timber is rather scarce. The railroad has some lands in Riley county, so also has the Agricultural College. Prices vary from \$2.50 to \$7 per acre back from towns. Improved land proportionately higher.

Pottowatomie County.

This is a large county. It contains much fine land. In some parts there are gravelly and flinty knolls. It is well watered by the Republican, Rock Creek, and the Red Vermillion. Much land formerly held by Indians now comes into market. In general characteristics much like Riley. The

county seat is Louisville, on Rock Creek. The railroad towns are—St. George, in a fine region, abounding in rock, and well adapted to the growth of grapes—Wamego also is at an important point—and St. Mary's, which is the center of the Pottowatomie Reserve. There is a Catholic school here for the education of Indian youth of this tribe.

Jackson County.

This is a large county, containing 552,000 acres, of which several thousand are open to pre-emption and homestead settlements. A part of the Kickapoo Reserve extends into the northern part of this county. The soil is good, surface favorable, water can be obtained easily, and there are many streams, among these the Cross, Soldier, Straight, Bills, East and West Muddy are the most important. Several varieties of limestone and good sandstone are found. There is a fair amount of timber. Coal also is found in moderate quantity. The two Union Pacific railroads in Kansas pass, one near the north line, the other near the south line. The Santa Fe railroad from Atchison will pass through the south-eastern corner. A good degree of interest is manifested in common schools, and there is a Methodist seminary at Circleville, 40 by 50 feet, built of stone, at a cost of \$5,000, also a graded school at Holton, the county seat, in the northern part of the county, at which place there are several churches. This county being near but not cut by railroads, will be very favorably situated for stock raising. Land rates from \$3 to \$10 for unimproved. Timber from \$5 to \$30. This is a very accessible county, and well worthy the attention of emigrants.

Jefferson County.

This county is highly favored in its location, having several of the most populous cities of Kansas not far from its borders. It is also well watered, the principal stream being the Grasshopper, which, with its tributaries, waters the west half of the county. The Union Pacific railway passes through the southern tier of townships, and the Atchison and Santa Fe railroad is to pass diagonally through the north-western townships. Oscaloosa is the county seat. Grasshopper Falls is an important town in the northern part of the county, and south of it, on the same river, Ozawkee. Land in this county much as in Atchison county.

Leavenworth County.

This is, and will continue to be, one of the most important

counties in the State. It contains the most populous city in the State, and its river and railroad facilities will always make it commercially a most important region. The Stranger and its affluents water the county through its entire extent in the interior, and the Missouri on the north-east. Timber is abundant. Real estate is, for Kansas, high. Leavenworth is an opulent, beautifully located, and finely built city of 20,000. The view from the heights in the rear of the city is charming. Above the city is the Old Fort, which has been an important military post for a long series of years. This is a very fine point, and the buildings connected with the fort present a noble front to the traveler on the river. There is a very valuable government reservation around the fort, which will very likely be sold, as the seat of military operations must move westward. Leavenworth has a very substantial appearance, many of its houses being of brick. One of the branches of the Union Pacific railway commences at this city, and unites with the main line at Lawrence. It runs about 30 miles in this county, and in such a way as to accommodate all parts of it except the north-west. The building of a railroad bridge across the Missouri is a necessity, if this city would maintain her pre-eminence in this region. The bridge is contracted for.

Wyandotte County.

This is in territorial extent the smallest in the State. It lies mainly between the Missouri and Kansas rivers. Contains much bottom land of the richest quality. Along each of these rivers there is a railroad, so that no county in the State equals it in proportional supply of river and railroad facilities.

Wyandotte is the county seat and principal place; but Kansas City, which lies adjacent, dwarfs this city at present. Quindaro is a river town. Land in this county is of course well high. Kansas City, in Missouri, is now growing the most rapidly of any city in this region. A railroad bridge is nearly completed here across the Missouri.

Johnson County.

This county is bounded on the north by the Kansas river and Wyandotte county, and on the east by Jackson county, Mo. It partakes of the unsurpassed fertility of the adjacent country in Missouri. It is rather sparsely supplied with timber. Small streams flow in all directions from it, and afford

stock water. It lies at the very gateway of the State, and now that the Kansas City and Fort Scott railroad is being built, the magnificent prairies of this county will no doubt be filled up with an enterprising and wealthy class of settlers. Olathe is the county seat.

Douglas County.

This is one of the richest, most populous, and most desirable counties in the State. It is watered by the Kansas and the Wakarusa, and their tributaries. The bottoms are excessively rich on both these rivers. There is also on the rivers and smaller streams an abundance of timber. In the early settlement of Kansas this county attracted attention by its great natural advantages. Lawrence is one of the most important cities in the State and the county seat. Its history will never be forgotten. Twice has it been given to the flames by invaders. Its citizens were repeatedly butchered in the most horrid manner. But in each instance, after temporary adversity, it has arisen more beautiful than before. The city proper lies south of the Kansas river, on a noble elevation. There is a good bridge over the Kansas river. The depot of the Union Pacific railway is on the north side, and the village there is called North Lawrence, or Jefferson P. O. There is considerable attention paid to manufacturing. In Lawrence there is capital, and with it enterprise. The State University is imposingly located on the crowning eminence, the view from which is surpassingly beautiful. Several railroads are projected from this city, besides the Lawrence and Galveston railroad, which is already completed nearly to Garnett, county seat of Anderson county. The soil on the Wakarusa is very deep and black, and produces very heavy crops, especially of corn and grass. There has been more attention paid to fruit growing in this region than in other parts of the State. Grapes do well. Peaches were exceedingly abundant this year (1868).

Baldwin City is a fine point. The College here is under the management of the Methodists. The country around is high rolling prairie, and very fertile. Rock is abundant. Leecompton was noted in the early history of the State, but at present is not flourishing. Big Springs, Tecumseh, Sigel, Black Jack, Prairie City, Willow Springs, Clinton, and Marion, are less important villages.

Shawnee County.

This is a first class county, both from excellence of soil,

abundance of rock, water, and timber, and from its present and prospective railroad facilities. The Kansas and Soldier rivers run through the northern tier of townships, and the Wakarusa through the southern. Mission Creek and the Shangemongee water the western and central parts. The rock here is of better quality than in some of the counties more eastern, and is quite suitable for building purposes. The Union Pacific railway passes in the Kaw valley through the northern townships. The Santa Fe railroad from Atchison passes diagonally through the county from north-east to south-west. These two roads will bring every farm in the county within a few hours ride from a railroad. The surface is very favorable for farming, and the bottom lands on the rivers are not excelled in Kansas. Topeka, the county seat, is also the capital of the State. This is noted as the place where the Free State Constitution was formed. It is beautifully situated, much like Lawrence, on a fine elevation on the south side of the Kansas river. It is growing finely, and the State House (the walls of one wing of which are up) bids fair to be one of the most imposing and beautiful structures of the kind in the Union. The United States Land Office for the N. E. district is located here. The rock used is procured from the magnesian limestone quarries at Junction City. Lincoln College is located near the State House, and is in successful operation. A female seminary is established here. Land in the immediate vicinity of the capital is rapidly advancing, but good farm land can be had at from \$5 to \$12 per acre for unimproved, and at corresponding rates for improved. For a man of means this is certainly a good region to go to. There are some noble farms on the Wakarusa bottom. Some of the leading towns are Tecumseh, Indianola, Dover, Auburn, Williamsport, Richland, and Big Springs.

Wabaunsee County.

This is a large county. Has the general characteristics of the adjoining counties already described. Quite a quantity of the Pottowattomie Reserve lands are now offered for sale. Kansas river runs on the northern border, and Mill Creek waters the central portions. The land in the southern part is on the divide between the streams flowing north and south. Wabaunsee is the county seat.

Davis County.

This county is bounded on the south by the Kaw and Re-

publican rivers, is less in size than Waubensee, but much like it; has greater railroad facilities, and is very important on account of the extensive quarries that are already worked at Junction City, and which extend along the line of the railroad. Junction City is well located on the borders of the Military Reserve belonging to Fort Riley, and a few miles west of that Fort. The United States land office for the north-western part of the State is established here, and immense quantities of land open to homestead and pre-emption settlement belong to this district. North-west of this place, up the valley of the Republican and Solomon, are some of the most inviting regions in our country. The Neosho river has its source from the southern boundary of this county, and the Neosho Valley railroad is to commence at Junction City, and run down to the south-eastern portion of the State, and there connect with the Galveston railroad. It is very probable that a railroad will also be constructed from Junction City to some point on the Big Blue, to intersect the C. B. U. P. railroad from Atchison.

The Kansas river above this region is called the Smoky Hill. The proprietors of one of the quarries have a fine lime-kiln, which can be made to burn 500 bushels of lime per day from the waste fragments of rock.

Dickenson County

Is an extensive and good county. The surface is level in many parts. The soil fertile. Timber is rather scarce. Abilene is the county seat—a railroad town, and noted as being the headquarters of the Texas cattle business. Vast herds of cattle are driven to this region, and shipped on the cars to be *finished off* in Illinois and more eastern States. Great opposition has been manifested by many of the citizens of Kansas to the introduction of these cattle, still they were brought in, and sent eastward, at the rate of thirty cars per day, much of the past season, in spite of outcries about Spanish fever, &c.

Saline County.

This is a large county. The Union Pacific railway passes diagonally through it. It is admirably adapted for stock-raising. There are valuable gypsum beds. The leading places are Solomon City, and Salina, the county seat. Plenty of government land to be had.

McPherson County

Is a very large and fair county. Not much settled as yet, as it is off the railroad.

Marion County.

Similar to McPherson in size and general characteristics. Watered by the Cottonwood. Timber scarce in most parts. The Santa Fe railroad is expected to pass through the southern part of the county. Marion Centre county seat.

Morris County.

A good sized county. The Neosho river heads here. Along this river country is broken. In other parts high and gently rolling prairie. Bottoms widen as the rivers flow south. The gypsum beds in and north of this county have a fertilizing effect. Soil very rich, and is likely to remain so, however hard it may be cropped. Rocks crop out in some parts. Water is abundant and good. Council Grove is the county seat, situated on the Neosho. The southern branch of the Union Pacific railroad is to pass through this county.

Chase County.

A first class county, watered by the Cottonwood and its tributaries. Some timber on the streams. Along some of the streams the land is broken, but generally it is favorable for cultivation. Rock is abundant, and easily obtained. Gypsum also is found. Black walnut, oak, and elm are also found on the streams. Land at low rates can be obtained. Cottonwood Falls, on the contemplated Santa Fe railroad, is the county seat.

Lyon County.

This is a long and large county. For natural wealth and prospective railroad facilities, this is one of the very best of the interior counties. It is watered by the head waters of the Marias Des Cygnes, the Neosho, which runs diagonally across it, the Cottonwood, and the head waters of the Verdigris. The bottoms are broad, ranging from two to four miles. Prairies rolling—somewhat broken on the Verdigris. Soil is extremely fertile and deep in both the uplands and valleys. Timber is found in considerable quantity. Well water pure and abundant, and easily obtained at from 15 to 30 feet.

Emporia is the county seat. This is an enterprising place, situated between the Cottonwood and Neosho rivers. Two important railroads are expected to meet here. An enterprising class of settlers have located in this county, and a good degree of attention is paid to the educational and religious wants of the region. The climate is mild, and the latitude adapted to the more tender varieties of fruit. The Neosho valley is thought to be superior for the growth of wheat. The washings of the immense deposits of gypsum existing at the head waters of the stream, are supposed by some to exert a very decided influence in producing the result. Forty bushels of wheat to the acre are not unusual returns. This valley certainly has unsurpassed attractions to those wishing a mild climate.

Osage County.

This is a large and central county. It is very fertile, and the surface is admirably adapted to agriculture. The head waters of the Marias Des Cygnes ramify the entire county, and the valleys are well supplied with timber. The Atchison and Santa Fe railroad is to pass through the north-western part of it. Coal is found in considerable quantity. Limestone rock is abundant. Burlingame, the county seat, is a point on the Atchison and Santa Fe railroad.

Franklin County.

This is a noble county. Medium in size, having a diversified surface and rich soil, well watered by the Marias Des Cygnes, being bisected by the Lawrence and Galveston railroad, well supplied on that stream with timber, and being near the abundant coal measures on the south-east, it presents great attractions to the settler who can bring some capital with him. Unimproved land is from \$5 to \$10 per acre.

Ottawa, the county seat, is a very fine town. An Institution of Learning is established here. An unusual degree of neatness prevails for a county town so new.

This county must be well adapted for fruit growing. Grapes and peaches did well in 1868.

Miami County.

This, like Franklin, is well watered and timbered. Abounds in rock. It is bisected by the Kansas City and Galveston railroad. Lies adjacent to one of the richest counties in

Missouri. There is an endless variety in the scenery. Soil exceedingly rich. Paola, the county seat, is a fine growing town on Peoria creek. Ossawatimie is noted as the scene of Ossawatimie Brown's exploits. Now that the old border difficulties are ended, these border-tier counties have a glorious prospect before them. Unrivalled in beauty and advantages of climate and soil, they must advance to the front rank of the farming and fruit-growing counties.

Geologically, this is a county of unusual interest. The variety of rocks is great. Saline springs are found, and worked with success—very good salt is obtained. Petroleum, or tar springs, are found also in various parts. The oil obtained is of a dark color, and is good for lubricating purposes. Some coal also is found.

Linn County.

This county, in size and natural advantages, is much like Miami county. The Marias Des Cygnes, or, as it is often called, the Osage river, waters the north-east part of the county. The Big and Little Sugar creeks water the central portions, and affluents of the Little Osage the southern parts. This is an exceedingly well watered and, for Kansas, well timbered region. The country in the vicinity of the principal streams is quite diversified in surface. The bottoms are unusually wide—the rolling portion sometimes is broken and in many portions, especially the southern, there are very many mounds of great beauty. Indeed there is no part of Kansas that affords so great a variety of pleasing scenery. Rock is abundant—both limestone and sandstone—which is well adapted for building and fencing purposes. Coal in very considerable quantity is found in the southern part of the county. Lead is found in Mine creek, near Potosi.

The Kansas City and Galveston railroad will bisect this county. Take it all in all, this is one of the most desirable counties in the State. Mound City is the county seat. No government land in this county. Land can be had, second-hand, at from \$5 to \$12½ per acre.

Bourbon County.

This county, in size, is about like the other border-tier counties. Like them, it is well watered, the principal streams being the Little Osage, Mill Creek, and the Marmiton. The surface is varied. Mounds, ridges, rolling prairie, and fine

bottom land are found in all parts of the county. One thing that is noticeable, as one comes southward through the southern border-tier counties, is this: on the top of ridges and mounds stones and solid rock often appear on the surface. This peculiarity is more marked in Bourbon county than in those more northern. Frequently, on ridgy portions, enough loose stone is on the surface to wall a farm, in order to get the stone out of the way of the plow. While this is so, immediately adjacent will be large interval portions very free from stone or rock at the surface. Another peculiarity is, that the soil is often thin and underlaid with rock on the highest points, and yet the whole will be finely grassed over. The presence of a peculiar weed indicates such land. While this is so, there is a vast quantity of first-class land. The emigrant will have to be more particular than in some other parts of the State, if he would obtain first-class land.

The leading advantage of this county is the abundance of good coal. This is often found cropping out at the surface of ravines, and sometimes on the high places. The vein is often from five to six feet thick. In grading the streets of Fort Scott immense quantities were got out. The abundance and good quality of the coal about Fort Scott will render that a fine point for machine shops and factories. The soil is partly of the black and partly of the mulatto variety. The latter is regarded as the richest, and is especially good for the growth of wheat and other small grain. One of the thriftiest vineyards and fruit orchards that I saw in Kansas was near Fort Scott. The soil, climate and surface of much of the land, will render this one of the very best fruit-growing regions of the State. Well water is not found easily in some portions, and owing to the presence of minerals, some wells are considerably impregnated, so as not to be pleasant to the taste.

Fort Scott was formerly an important military post. Now it is the most important business point in south-eastern Kansas. It is growing finely. There are several churches and some fine brick stores. This promises to be a railroad center. In addition to the Galveston road, one to Sedalia, or Pleasant Hill, Mo., will probably be soon built. Land in this county is held at from \$5 to \$12½ per acre for unimproved prairie.

In boring for petroleum, a vein of coal was found fifteen feet thick, and, still deeper, a salt spring, where brine was very strong. A very fine black variety of marble is found in

the southern border of the county, it admits of a fine polish, and is beautifully clouded, it is, however, very hard, so as to be worked with difficulty.

Neutral Cherokee Lands. Crawford County and Cherokee County.

These two counties lie in the south-eastern corner of the State. They contain a little over 800,000 acres. They were purchased by the Cherokee Indians of the United States about thirty-five years ago, for \$500,000 in gold. The Cherokees have not occupied them, and have made repeated efforts to induce the United States to buy them back. By treaty of 1866, the lands were placed, in trust, in the hands of the Secretary of the Interior, to sell in a body, at not less than \$1 per acre, cash. The Emigrant Aid Society made an arrangement for them, at a dollar per acre, when Hon. James Harlan was Secretary. By this sale, only a part of the purchase money was to be paid down, and the unpaid balance was to run on at 5 per cent. interest. Secretary Browning obtained an opinion from the Attorney General adverse to the validity of the sale made by his predecessor, and Mr. Joy, of Detroit, Michigan, bargained for them. To save litigation, a compromise between the Emigrant Aid Society and Mr. Joy was effected, and a supplementary treaty was made with the chiefs of the Cherokee Indians, in the summer of 1868, and ratified by the Senate, by which treaty the lands were sold to Mr. Joy on essentially the terms made originally with the Emigrant Aid Society; \$75,000 has been paid, and the balance is to be paid when the pre-emption claims of settlers, and the "head right" claims of Indians, in all amounting to 1600 quarter sections, or 256,000 acres, or about one-third of the whole tract, are paid up. These claims are to be satisfied with the United States government, upon an appraised valuation, of from \$1.50 to \$3 per acre. The head-right claims are kept, or deeded away, by such Indians as took a half section, in lieu of their interest in the Cherokee tribe. Mr. Joy pays \$1 per acre on what land remains.

Not a little excitement prevails among the recent settlers, lest the new proprietor shall use his control of the lands to their injury, by demanding unreasonable prices. This excitement will probably subside when it is ascertained on what terms land can be had. Mr. Joy says he is disposed to make favorable terms, and as soon as a railroad route from Fort

Scott has been located, he will arrange the prices according to worth and distance from the track.

These neutral lands have long been known, and have been praised in the highest terms. They are principally prairie. The climate is mild and healthy. The surface is for the most part gently rolling. The soil is of fair average quality, some parts being very rich, and other parts being second class and gravelly. Spring river, a noble stream, runs through the south-east, and the Neosho through the south-west part of the Cherokee Lands. There is fine timber on each stream; and there are good mill sites. Fish abounds in Spring river. This country is a good fruit, winter wheat, and stock region. Coal of good quality in vast quantity is found in all parts, and is easily got out. The main drawback, so near as I can judge, is, that the well water, in many parts, is so impregnated with mineral as to be unpleasant to the taste, especially in warm weather. Well water is easily found. In some parts very good springs of good water are found. This region is adjacent to the famous lead mines of Jasper and Newton counties, in Missouri. It is well settled, for so new a country, in the southern part of the Cherokee Lands, or where the land is best and timber most abundant, on the Spring, Neosho, and other rivers. Crawford county is sparsely supplied with timber, and is less settled. The surface is gently rolling for the greater part. There is much mulatto soil. Baxter Springs, on the borders of the Indian Territory, is the county seat of Cherokee county. This is a thriving place of 1500. It does a large business with the surrounding country. Pine lumber is hauled up from the Indian country fifty miles, and is worth from \$25 to \$50 per *M*.

Near Baxter's Springs is Lowell, a fine young town, having a good water power at the junction of Shoal creek with Spring river. Oak lumber is here worth \$25 per *M*. Black Walnut \$35 per *M*. Owing to the peculiar state of things about land titles etc., the influx of emigration, which was strong, is retarded. The prices of land, where the claim is on the United States, is rather high.

Neosho and Labette Counties.

These lie adjacent to the Neutral Lands on the west. They are both watered by the Neosho river, which is a guaranty of their excellence. Timber along the water courses is abundant, the climate mild, soil and surface good. This region

is fast filling up. Canville is the county seat of Neosho county, and Chetopah is the leading town in Labette county. This place is only a year old, yet it contains many fine stores and hotels, and bids fair to become a very important trading place. It is located in the south-east corner of the county, near the Neosho.

The country directly west of these counties is mostly Osage Indian land, but will soon be occupied by white people. The country is a fine one, especially on the Verdigris and its tributaries. The mildness of the winter will make this a favorite region for stock raising.

Allen County.

This county lies directly west of Bourbon county. It is watered in the western half by the Neosho, and is a very fine county. Much like Bourbon in its natural advantages.

Humboldt is the county seat, and the location of the United States Land Office for Southern Kansas. There is much land that can be had for homestead and pre-emption settlement in this district; the government land is however sold in the eastern counties for several tiers from Missouri State line.

Anderson County.

This is much like Linn and Franklin counties, though not traversed by so many water courses. The northern part is best watered. The Leavenworth and Galveston railroad is now being graded to Garnett, the county seat, and this will hasten the settlement of this county.

Coffey County

Is a first-class region. Soil excellent. Timber abundant. The Neosho river runs diagonally through the center. The Neosho Valley railroad, or South Branch, is to pass through this county and its county seat, Burlington. Many good settlements have been made, and considering its being a little off the great avenues of travel, it is growing rapidly.

Woodson County.

There is much most excellent land and timber along the streams which flow through all parts of this county, viz: the Turkey, Owl, Neosho and head waters of the Verdigris. The upland portion is also good. Neosho Falls is the county seat.

Greenwood County.

This is a very large and fertile county, well watered by Fall River and other tributaries of the Verdigris. This is exceedingly well adapted for stock raising, as the latitude is favorable and grass luxuriant. Good timber is found on many of the streams, and first class farms can be made. Janesville is the county seat.

Butler County.

There are good bottoms on the White Water and Walnut Creeks,—timber and rock abound,—a good grazing country. Chelsea is the county seat.

CENTRAL AND WESTERN KANSAS.

Most of this region is as yet unsurveyed. In the northern tiers of counties where government surveys have been made, there are some most beautiful regions in Republic, Jewell, Smith, Phillips, Osborn, Mitchell, Ottawa, and Lincoln counties. No region in the world is more completely reticulated with streams and creeks, than in the northern counties just enumerated, the affluent waters of the Republican and Solomon rivers. The Buffalo and Elk that make these regions their favorite haunt are no fools. Luxuriant grass does not grow on arid and sterile soil.

By recent advices from the General Land Office (1869), Commissioner Wilson announces that 22 townships, north of the Arkansas river, around and including the United States Military Reservation at Fort Zarah, have been surveyed. The survey including an area of 497,400 acres. The surface is gently rolling, and the soil mostly second rate. (By second rate in government surveys is meant good land, but not in depth and fertility equal to the richest bottoms.) The tract is watered by the Arkansas river, which bounds it on the south, Plum, Cow, and Walnut creeks, tributaries of the Arkansas. The land along the Arkansas is mostly level, in some places inclined to be too wet for cultivation, and the soil is mostly of the first quality. Along the creeks the soil is of excellent quality, and well adapted for agricultural purposes. The lands setting back from the streams are more rolling, and the greater part of them only suitable for grazing purposes. A part of this tract includes the divide between the Arkansas and the Smoky Hill rivers. This portion is high, and in places broken. Lime and sand stone are found in every part in

abundance. Timber is scarce except on a few of the streams. This region holds out good inducements to those who wish to follow stock raising.

In the extreme western portion of Kansas, the time has not yet come to speak positively of its capabilities, but it will probably become a good pastoral and farming region. A few years will throw light on this subject, as now the U. P. R. R. will introduce adventurous emigrants who will rush past the fertile valleys and plains of eastern Kansas, in hope of a more golden region beyond. When prairie fires shall be prevented by countless herds that shall keep down the prairie grass, forests will grow up. The never ceasing breezes will yet be made serviceable in pumping water to irrigate what has been called desert. And it is not altogether visionary to suppose that the time will come when the most arid portion of central Kansas shall bud and blossom as the rose.

CONCLUDING REMARKS.

It may seem to the reader that, in the brief description given of the various counties, all are praised, while the deficiencies of all have been omitted. To such I would say : go and see. As the traveler passes from one county to another, he is constantly surprised to find endless variety, but no sterility. On every hand magnificent prairies and beautiful valleys, but no unsightly objects. Some variation there is in soil and climate, in quantity of timber, rock, coal, and other natural advantages ; but all, yes all, is very good.

Kansas, although without mountain scenery, and dashing rivers, and vast forests, is still peerless in beauty. Nor will she become less beautiful, when her broad surface is dotted over with cities and villages, churches and gardens, and orchards, and countless herds, and waving fields of golden grain. Midway between the oceans, at the base of the loftiest mountain range, and by the side of the mightiest river of the continent, she is set, the emerald gem in the empire of States.

The emigrant will travel long, and in the universal excellence of soil, be puzzled where to choose. Probably the best way for him will be to gain, from a general description, a knowledge which will enable him to decide which part of the State affords the particular advantages which he seeks. Then let him go thither, and, from personal inspection, select such a location as strikes him best. It is not enough that the land be good, but it must be well situated, well watered, well surrounded, to render a settler contented.

There are great facilities afforded in Kansas for procuring unimproved second-hand land. There are, at the several United States Land Offices, and in the principal cities, persons in the land business who have lands for sale. The Union Pacific Railway Company offer great facilities to those seeking for land, at their land office at Lawrence. They have agents also at the leading stations nearest the lands for sale. They offer land at very reasonable rates, and give long time if it is desired. It is needless to add that, other things being equal, land near a railroad is, for farming purposes, much to be preferred.

Along the railroads that had land grants, there are opportunities to obtain lands by homestead and pre-emption ; but in the eastern counties this opportunity will soon be gone, as settlers are constantly entering their claims. At this time, most desirable government lands to be had off the Pacific railroads, are in the country on the Big and Little Blue, the Republican, and Solomon rivers ; these belong to the Junction City Land District. If a person is very limited in means he had better not push to the most unsettled parts. Such an one would be more apt to succeed in a region where there is some settlement already made ; where he can, in case of failure of a crop, find employment, and where he can, by helping others, be helped in return, especially by machines.

A young man would often do as well to hire out a year, and look around, before he locates ; but having selected a farm, the main thing for success, after industry, is to *stick*. Go to work at once to make a desirable and permanent home. *Set out fruit trees, vines, hedge rows, shade trees. Commence operations in this line the first season, and devote some time to this work every year, and never forget to protect from cattle and prairie fires every improvement of this kind.* If, for the first few years, great headway is not made, do not give up, do not sell out for a song, or even for cost of improvements, **HOLD ON—WORK ON**, and be sure the land in Kansas will, at length, lift you up and make you independent.

POPULAR VOTE OF KANSAS

BY COUNTIES, AT THE PRESIDENTIAL ELECTION 1868.

Allen County	893	Lima	1,725
Anderson	742	Lyon.....	1,056
Atchison.....	2,231	Marion	99
Bourbon	1,929	Marshall.....	742
Brown	869	Miami.....	1,807
Butler	228	Morris	327
Chase.....	314	Nemaha.....	863
Clay.....	196	Neosho.....	1,117
Crawford.....	744	Osage.....	505
Cherokee, no returns.		Ottawa.....	185
Coffey.....	898	Pottowatamie.....	913
Cloud.....	111	Republic.....	65
Davis.....	627	Riley	717
Dickenson.....	292	Shawnee... ..	1,810
Doniphan.....	2,270	Saline.....	465
Douglas.....	3,034	Wabaunsee.....	374
Ellis.....	239	Washington.....	253
Ellsworth	294	Wilson	560
Franklin.....	1,349	Woodson	344
Greenwood	439	Wyandotte.....	1,197
Jackson.....	866		
Jefferson.....	1,992	Total	45,067
Johnson.....	2,210	Allowing 7 inhabitants for	
Labette.....	783	every voter, population	315,476
Leavenworth.....	5,001		

The above table will afford as reliable an estimate as can be made of the relative population of the various counties.

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